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No. 227

PUBLIC HEALTH LAWS OF ILLINOIS.

—AND—

SANITARY MEMORANDA.

1884



PUBLIC HEALTH LAWS

—OF—

ILLINOIS

—AND—

SANITARY MEMORANDA

—FOR THE—

INFORMATION AND USE

—OF—

Local Health Authorities and Others.

✓
ILLINOIS STATE BOARD OF HEALTH.

1884.

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SANITARY CODE AND MEMORANDA.

{ ILLINOIS STATE BOARD OF HEALTH,
{ OFFICE OF THE SECRETARY, Springfield, July, 1884.

THE appended SANITARY CODE has been prepared in further discharge of the duty devolved upon the STATE BOARD OF HEALTH by Section 2 of the Act of 1877, creating the BOARD, and which invests it with "authority to make such rules and regulations, and such sanitary investigations, as they may deem necessary from time to time for the preservation or improvement of public health."

Heretofore the BOARD has deemed it advisable to limit the exercise of its powers, under this Section, to action in the immediate presence of some menace to the public health which could only, or best, be met by a concert of action and weight of authority not to be commanded by local health organizations. As for example, in the threatened invasion of yellow fever in the southern portion of the State, and in the recent epidemic prevalence of small-pox throughout three-fourths of its area. Enforcement of quarantine restrictions and sanitary inspections in the former, and of general preventive and protective measures in the latter instance, were most efficiently secured through the orders and circulars of the STATE BOARD; as well, also, as the necessary co-operation and uniformity of action by neighboring authorities, between which the BOARD furnished a natural and proper bond of union and medium of communication.

Aside from this, its rules and regulations have hitherto been confined to such general subjects as, from their nature, affected the State at large, or extensive areas thereof, rather than individual localities: The

sanitation of railways and railway travel; the transportation of corpses; the pollution of rivers and other sources of water-supply; the suppression of contagious and infectious diseases liable to epidemic spread; measures against the introduction of contagion from without; etc.

Up to the present time such action as above recited has been deemed all that it was practicable or expedient for the BOARD to attempt. But the possibility of an invasion of the United States by Asiatic cholera makes it incumbent to now secure a more thorough sanitary organization of the State than has yet been effected, and the adoption of a uniform Sanitary Code to as great an extent as practicable. As is remarked in the Circular-Letter of the BOARD, No. 222, issued July 3, 1884:

"It is entirely possible that we may escape a visitation of Asiatic cholera this year, although there is yet plenty of time for the disease to reach our shores before cold weather. But even if there were no danger from this source, it should be remembered that everything which is done in the direction of sanitary improvement benefits the general health, reduces the amount of sickness, and lessens the death-rate. An obvious duty, therefore, rests at all times, but more urgently at present, upon those charged with the administration of public-health affairs, to take such steps as may be necessary to remedy any defects in the existing sanitary status."

To this end the following rules and regulations are offered, in the form of a Model Sanitary Ordinance, for the adoption of all communities which have not yet secured a health organization; as well as for substitution for sanitary ordinances and laws which have been found defective or inoperative. Appended is a digest or summary of all public-health laws now in force in the State, from which may be learned the powers and authority which health organizations may legally exercise. Specific information, concerning matters of preventive medicine and general sanitation, is also added for the benefit of medical health officers and others.

BY ORDER OF THE BOARD:

JOHN H. RAUCH, *Secretary.*

THE ILLINOIS SANITARY CODE.

THE second section of An Act to Create and Establish a STATE BOARD OF HEALTH in the State of Illinois, approved May 25, 1877, in force July 1, 1877, reads as follows:—

THE STATE BOARD OF HEALTH shall have the general supervision of the health and life of the citizens of the State. They shall have charge of all matters pertaining to quarantine; and shall have authority to make such rules and regulations, and such sanitary investigations as they may, from time to time, deem necessary for the preservation or improvement of public health; and it shall be the duty of all police officers, sheriffs, constables, and all other officers and employees of the State, to enforce such rules and regulations, so far as the efficiency and success of the BOARD may depend upon their official co-operation.

Under this section, says Attorney General McCARTNEY, broad duties devolve upon the STATE BOARD OF HEALTH, and ample power is given to enable them to discharge such duties.

They not only have the right, but it is their duty, to make any and all rules and regulations which they may deem necessary to preserve the public health.

Such rules and regulations, when promulgated, have the force and authority of law, and are to be enforced, if necessary, by the entire power, of the State.

The phrase, "all other officers and employees of the State," is held to mean *all other public officers and employees in the State*, and not merely State officers and employees; and under this interpretation the Attorney General decides that school officers are included, as well as all local health authorities.

THERE are four classes of local health organizations existing in the State, to-wit:

I. Boards of health of cities, towns and villages incorporated under special acts of the legislature.

II. Boards of health of cities, towns, and villages incorporated under the general law.

III. Boards of health of townships in counties under township organization.

IV. Boards of health of counties not under township organization.

In cities, towns or villages incorporated under special acts, the charters creating them ordinarily provide who shall constitute the boards of health, or how they shall be appointed.

In cities, towns and villages incorporated under the general law, the boards of health are appointed by the city council, or village board, by virtue of Section 62, *item* 76, Chapter 24, Revised Statutes.—See Appendix, page 14.

In counties under township organization, the supervisor, assessor and town clerk constitute the board of health for their respective townships, by virtue of Section 127, Chapter 139, Revised Statutes.—See Appendix, *Township Board of Health*.

In townships not under township organization, the county commissioners constitute the board of health for their respective counties, by virtue of their general powers to control and regulate the affairs and interests of the county.

IN framing a Model Sanitary Ordinance it has been attempted to make it simple, direct and comprehensive; and to secure in it substantial accord with existing legislation concerning the public health—a digest of which will be found in the Appendix.

Only so much of the Model Ordinance as is applicable to any given locality should be adopted or included in the ordinance of such locality; but it is recommended—in order to secure uniformity and consequent greater efficiency, and facility of co-operation in cases of emergency or of mutual concern—that existing health ordinances be made to conform to this, so far as practicable.

Township and county boards (constituted as above defined,) should adopt such of these provisions as may be applicable to their respective localities, whenever conditions arise justifying their action as boards of health. Their powers under the statutes, to abate nuisances and otherwise to act for the protection of the public health, will be found in the Appendix.

With such changes as may be made necessary by the provisions of special charters or acts of incorporation, the following form of ordinance will be applicable to cities, towns and villages of the two classes first enumerated, to-wit: those incorporated under special acts, and those incorporated under the general law.

AN ORDINANCE

FOR THE PROTECTION OF THE PUBLIC HEALTH.

Be it ordained by the [city council or president and board of trustees, as the case may be] of the [city or village] of _____ county of _____, State of Illinois:—

*ARTICLE I. That there shall be appointed by the said [city council or president and board of trustees] a board of health in and for said [city or village] to be composed of four persons, who shall hold office for terms as follows: one member for one year, one member for two years, one member for three years, one member for four years; and at the expiration of the term of each member the vacancy shall be filled by appointment for a term of four years. The compensation of members, officers and employees of the board shall be fixed by the [city council or board of trustees] from time to time.

†ARTICLE II.—HEALTH OFFICER AND SANITARY POLICEMAN.

Section 1. That there shall be appointed by said board of health a medical health officer, who shall be a legally-qualified physician, possessed of the requisite knowledge of sanitary science and of preventive medicine; and who shall be, *ex-officio*, a member of said board of health and whose duty it shall be to assist and advise the board in all matters relating to public health, and to superintend, under the direction of the board, the enforcement and observance of the provisions of this ordinance.

§ 2. That there shall be appointed by the said board of health a sanitary policeman or policemen, who shall assist the medical health officer, and perform the duties and service hereinafter indicated, or which may be prescribed by the said board, from time to time, for the preservation or improvement of the public health.

*See POWERS OF CITY COUNCILS AND VILLAGE TRUSTEES: Items seventy-sixth, seventy-eighth, seventy-ninth, eighty-first, eighty-third. Also TERRITORIAL JURISDICTION; JURISDICTION OVER WATERS; WATER-WORKS; CEMETERIES.—All references, where not otherwise specified, are to subjects in the APPENDIX.

†See MEDICAL HEALTH OFFICER.

*ARTICLE III.—BUILDINGS AND PREMISES.

Section 1. That whenever it shall come to the knowledge of the board of health, or of its officers or employees, that the condition of any building or premises is injurious to the health or dangerous to the lives of the occupants or of the public, it shall be the duty of the medical health officer or sanitary policeman to make a thorough examination of the building or premises, and to direct and instruct as to the remedy of such condition; and if this be not remedied within a reasonable time, he shall report the facts to the board of health, who shall, thereupon, cause such building or premises to be put in good sanitary order, at the cost of the individual responsible for, or causing, such unhealthful condition.

†ARTICLE IV.—STREETS AND GROUNDS.

Section 1. That the deposit of offal, garbage, night-soil, or refuse of any description upon any street, alley, vacant lot, public grounds or premises, within the limits of the [city, town or village] of _____ except by direction or written permission of the board of health, is declared a misdemeanor, and punishable as such.

§ 2. That it shall be the duty of the sanitary policeman to exercise a vigilant supervision over such places, and to notify any person found making such deposit, or responsible for the same, to remove the offending matter at once, and to properly cleanse the place. And if such removal and cleansing be not effected within twenty-four [24] hours after notification, the offending person or persons, may be prosecuted under the statute, and the necessary removal and cleansing shall be performed at the expense of such person or persons.

‡ARTICLE V.—NUISANCES.

Section 1. That it is a public nuisance—

To cause or suffer the carcass of any animal or any offal, filth or noisome substance to be collected, deposited or to remain in any place, to the prejudice of others;

To throw or deposit any offal or other offensive matter, or the carcass of any animal, in any water-course, lake, pond, spring, well or common sewer, street or public highway;

To corrupt or render unwholesome or impure the water of any spring, river, stream, pond or lake, to the injury or prejudice of others;

*See POWERS OF CITY COUNCILS AND VILLAGE TRUSTEES: Items *sixty-first*, and *eighty-first* to *eighty-fourth*, inclusive. Also NUISANCES: Items 6, 7 and 8, Sec. 221 and 222. Also PUBLIC BUILDINGS.

†See POWERS OF CITY COUNCILS AND VILLAGE TRUSTEES: Items *seventh* to *twelfth*, inclusive; *thirteenth* to *sixteenth*, inclusive. Also TERRITORIAL JURISDICTION. Also NUISANCES: Items 1 and 5, Sec. 221.

‡See POWERS OF CITY COUNCILS AND VILLAGE TRUSTEES: Items *fortieth* and *seventy-fifth*. Also NUISANCES.

To erect, continue or use any building or other place for the exercise of any trade, employment or manufacture, which, by occasioning noxious exhalations, offensive smells, or otherwise, is offensive or dangerous to the health of individuals, or of the public.

§ 2. That it is hereby made the duty of the board of health of _____ to cause the summary abatement of any such nuisance at the proper expense and cost of the party or parties responsible for the nuisance; and in the event of said party or parties failing to defray such expense and cost, then the board of health shall file complaint and information, and cause suit to be brought under Section 222, Chapter 38, of the Criminal Code.

***ARTICLE VI.—SEWERS, PRIVIES AND CESS-POOLS.**

Section 1. That no privy-vault or cess-pool for sewage shall be permitted in any part of _____ where a sewer is provided in front of the property lines; and no connection from any cess-pool or privy-vault shall be made with any sewer or drain-pipe; nor shall any opening be made in the sewer-pipe of a building for the purpose of affording surface drainage for the cellar, without proper provision against the access of sewer-air into the building.

§ 2. That no privy-vault, cess-pool, or reservoir into which a privy, water-closet, stable or sink is drained, shall be established or permitted within fifty feet of any well, spring or other source of water used for drinking or culinary purposes, without written permission from the board of health based upon the advice of the medical health officer. And every privy-vault and cess-pool shall be cleaned, and the contents thereof removed, at least once before the first of May in each year.

§ 3. That all sewers or drains that pass within fifty feet of any source of water used for drinking or culinary purposes shall be water-tight.

†ARTICLE VII.—FOOD.

Section 1. That no article of food or drink intended for human use or consumption, nor any article of such food or drink, or which may be used in the composition or preparation of such food or drink, not being then healthy, fresh, sound, wholesome, fit and safe for such use; nor any animal or fish that died by disease or accident; and no carcass of any calf, pig or lamb, which, at the time of its death, was less than four weeks

*See POWERS OF CITY COUNCILS AND VILLAGE TRUSTEES: Items *twenty-seventh, twenty-ninth and eighty-fourth*. Also NUISANCES: Sec., 222, item 2. Also SEWERAGE.

†See POWERS OF CITY COUNCILS AND VILLAGE TRUSTEES: Items *fiftieth, fifty-second, fifty-third*. Also FOOD-SUPPLY; WATER-SUPPLY.

old, and no meat therefrom; shall be brought within the limits of _____, or offered, or held for sale, as food anywhere in said _____.

*ARTICLE VIII.—SCHOOLS.

Section 1. That the board of health of _____ shall have jurisdiction in all matters pertaining to the preservation of the health of those in attendance upon the public and private schools in the [city or village] of _____; to which end it is hereby made the duty of the said board of health, through its medical health officer and sanitary policeman—

To require that all persons attending said schools, either as teachers or pupils, shall have complied with the order of the State Board of Health concerning vaccination;

To exclude from said schools any person suffering with a contagious or infectious disease, or liable to convey such disease among those in attendance;

To make regular inspections of all school buildings and premises, as to their hygienic condition; and to report the result of such inspections to the _____, and to those having charge and control of such schools, with instructions as to the remedy of conditions (if any such be found,) whereby the health of those in attendance may be impaired or life endangered.

§ 2. That in the event of failure or refusal of those having such charge and control to carry out the instructions so given, then the board of health shall cause such faulty conditions to be remedied at the proper cost and expense of those having charge and control of the school or schools.

†ARTICLE IX.—CONTAGIOUS DISEASES.

Section 1. That the rules and regulations of the Illinois State Board of Health, concerning cholera, small-pox, yellow fever, diphtheria, scarlet fever, typhoid fever, and other contagious or infectious diseases, shall be enforced by the board of health of _____, under the supervision of the medical health officer; and for the enforcement of said rules and regulations all public officers of _____, in their proper capacities, are hereby commanded and enjoined to assist the said board of health.

* See ORDER OF STATE BOARD OF HEALTH Concerning Vaccination of School-Children. Also Rules and Regulations of STATE BOARD OF HEALTH concerning Contagious and Infectious Diseases.

† See POWERS OF CITY COUNCILS AND VILLAGE TRUSTEES: Items seventy-seventh and seventy-eighth. Also Rules and Regulations of STATE BOARD OF HEALTH concerning Contagious and Infectious Diseases.

§ 2. That no person or thing liable to propagate a contagious disease shall be brought within the limits of _____ without the special permit and direction of the board of health, and whenever it shall come to the knowledge of any person that such person or thing has been brought within such limits he shall immediately give notice thereof to the said board, together with the location thereof. No person shall, within the built-up portion of _____, without a permit from the board of health, carry or remove from one building to another, [*or from any vessel to the shore**] any person sick of a contagious disease. Nor shall any person sick with a contagious disease, or liable to communicate and spread contagion, be shipped or removed from _____ to any other place, except under the charge and direction of the board of health, and with proper precautions against the spread of the contagion.

†ARTICLE X.—NOTIFICATION OF CONTAGIOUS DISEASES.

Section 1. That every householder within the limits of _____ in whose dwelling there shall occur a case of cholera, yellow fever, typhoid fever, scarlet-fever, diphtheria or small-pox, shall immediately notify the board of health of the same; and until instructions are received from the said board, clothing or other property that may have been exposed to infection shall be removed from the house; nor shall any occupant change his residence elsewhere, without the consent of the said board during the prevalence of any public danger from said disease. And all physicians or other attendants upon any person sick with small-pox, cholera, typhoid or scarlet fever, diphtheria, or other disease dangerous to the public health, shall forthwith report the same to the said board of health; and said board shall at once notify the State Board of Health of the existence of such disease, and shall subsequently cause a full report to be made by the medical health officer to the Secretary of the State Board of Health, upon the blank forms furnished for that purpose.

†ARTICLE XI.—BURIALS.

Section 1. That no burial or interment shall be lawful in the _____ of _____, nor shall any dead body be removed from said _____, until a permit for such burial, _____

* Applicable only to localities having water communication.

†See POWERS OF CITY COUNCILS AND VILLAGE TRUSTEES: Item seventy-eighth. Also *Notification of Contagious Diseases*, Order of STATE BOARD OF HEALTH.

‡See *Circular-Letter* of the STATE BOARD OF HEALTH concerning *Burial Permits*. Also *Form of Burial Permit*; also *Rules for the Transportation of Corpses by Railroads and Steamboats*.

interment or removal shall have first been obtained from the
* _____ of said _____.

§ 2. That such permit shall be issued by the * _____ upon his receipt of the usual certificate of death, signed by (1) the attending physician in the case; or, if none, by (2) one of the parents of the deceased; or, if none, by (3) the nearest of kin not a minor; or, if none, by (4) the resident householder where the death occurred; or, if none, by (5) any reputable citizen cognizant of the facts and circumstances of the death; or, if the death be the subject of an inquest, by (6) the coroner or other officer holding said inquest.

§ 3. That the * _____ shall enter in a suitable book to be kept for that purpose, a record of all burial permits issued, specifying the date of issue and to whom issued, together with all the items of information contained in the certificates upon which the issue of such permits is based; and he shall furnish to the county clerk of _____ county, at the end of each month all of said certificates so received during the month.

§ 4. That the transportation or removal of bodies of persons who have died of small-pox, cholera, yellow fever, diphtheria, or other disease dangerous to the public health, is forbidden within the limits of _____ except in conformity with the rules and regulations of the State Board of Health concerning the same.

ARTICLE XII.—SANITARY INSPECTIONS.

Section 1. That the board of health shall cause a thorough sanitary inspection of the entire area within its jurisdiction to be made under the supervision of the medical health officer, at least once each year, and oftener if necessary. Such inspection shall include all matters affecting the public health; and a report of the sanitary conditions disclosed by the inspection shall be made to the † _____ of _____, and to the State Board of Health, upon the blanks furnished for that purpose by the said State Board.

†ARTICLE XIII.—DISEASED ANIMALS.

Section 1. That no domestic animal afflicted with a contagious or infectious disease shall be allowed to run at large, or to be exposed in any public place, whereby the health of man or beast may be affected, within the limits of _____; nor shall such diseased animal

* City or village clerk, or secretary or clerk of the board of health, as may be determined.

† City Council or Board of Trustees, as the case may be.

‡ See DISEASES OF ANIMALS.

be shipped, or removed, from the premises of its owner, except under the supervision of the board of health of _____, or of the State Veterinarian. And it is hereby made the duty of the board of health to secure such disposition of any diseased animal, and such treatment of infected premises, as to prevent the communication and spread of the contagion or infection, except in cases where the State Veterinarian is empowered to act; and in all such cases the board of health will co-operate with the State Veterinarian so far as such co-operation may be necessary to the protection of the interests of _____.

***ARTICLE XIV.—PENALTIES.**

Section 1. That the violation of any of the foregoing provisions and any interference with the board of health in its execution and enforcement of this ordinance, shall be punishable by fine, not exceeding two hundred (200) dollars for each offense, in addition to the liability to such punishment as is provided by the statutes for specific offenses.

† ARTICLE XV.—ORDINANCE IN FORCE.

Section 1. That this ordinance shall be in force from and after its passage and publication.

*See POWERS OF CITY COUNCILS AND VILLAGE TRUSTEES: City council and village trustees have the power "to pass all ordinances, rules, and make all regulations, proper or necessary to carry into effect the powers granted to cities or villages, with such fines or penalties as the city council or board of trustees shall deem proper: *Provided*, no fine or penalty shall exceed \$200, and no imprisonment shall exceed six months, for one offense."—*Revised Statutes*, Chapter 24, Section 26, Item *ninety-sixth*.

† "All ordinances of cities and villages in posing any fine, penalty, imprisonment or forfeiture * * * shall, within one month after they are passed, be published at least once in a newspaper published in the city or village; or if no such newspaper is published therein, by posting copies of the same in three public places in the city or village; and no such ordinance shall take effect until after it is so published."—*Revised Statutes*, Chapter 24, Section 64.

APPENDIX.

Powers of City Councils and Village Trustees:

CITY COUNCILS in cities, and presidents and boards of trustees in villages, incorporated under the general law, have the following powers by Chapter 24, of the Revised Statutes, Section 26:—

Seventh—To lay out, to establish, open, alter, widen, extend, grade, pave, or otherwise improve streets, alleys, avenues, sidewalks, wharves, parks, and public grounds, and to vacate the same.

Eighth—To plant trees upon the same.

Ninth—To regulate the use of the same.

Tenth—To prevent and remove encroachments or obstructions upon the same.

Eleventh—To provide for the lighting of the same.

Twelfth—To provide for the cleansing of the same.

Thirteenth—To regulate the openings therein for the laying of gas or water mains and pipes, and the building or repairing of sewers, tunnels and drains, and erecting gas lights: *Provided*, however, that any company organized under the general laws of this state, or any association of persons organized, or which may be hereafter organized, for the purpose of manufacturing illuminating gas to supply cities or villages, or the inhabitants thereof with the same, shall have the right, by consent of the common council (subject to existing rights), to erect gas factories, and lay down pipes in the streets or alleys of any city or village in this State, subject to such regulations as any such city or village may by ordinance impose.

Fourteenth—To regulate the use of sidewalks and all structures thereunder; and to require the owner or occupant of any premises to keep the sidewalks in front of or along the same, free from snow and other obstructions.

Fifteenth—To regulate and prevent the throwing or depositing of ashes, offal dirt, garbage or any offensive matter in, and to prevent injury to, any street, avenue, alley or public ground.

Sixteenth—To provide for and regulate crosswalks, curbs and gutters.

Twenty-First—To regulate the speed of horses and other animals, vehicles, cars and locomotives within the limits of the corporation.

Twenty-Seventh—To require railroad companies to keep flagmen at railroad crossings of streets, and provide protection against injury to persons and property in the use of such railroads. To compel such railroad to raise or lower their railroad tracks to conform to any grade which may, at any time, be established by such city; and where such tracks run lengthwise of any such street, alley or highway, to keep their railroad tracks on a level with the street surface, and so that such track may be crossed at any place on such street, alley or highway. To compel and require railroad companies to make and keep open, and to keep in repair, ditches, drains, sewers and culverts along and under their railroad tracks, so that filthy or stagnant pools of water cannot stand on their grounds or right of way, and so that the natural drainage of adjacent property shall not be impeded.

Twenty-Ninth—To construct and keep in repair culverts, drains, sewers and cesspools, and to regulate the use thereof.

Thirtieth—To deepen, widen, dock, cover, wall, alter or change the channel of water-courses.

Fortieth—To provide for the cleansing and purification of waters, water-courses and canals, and the draining or filling of ponds on private property, whenever necessary to prevent or abate nuisances.

Forty-Ninth—To establish markets and market-houses, and provide for the regulation and use thereof.

Fiftieth—To regulate the sale of meats, poultry, fish, butter, cheese, lard, vegetables, and all other provisions, and to provide for place and manner of selling the same.

Fifty-Second—To regulate the sale of bread in the city or village; prescribe the weight and quality of the bread in the loaf.

Fifty-Third—To provide for and regulate the inspection of meats, poultry, fish, butter, cheese, lard, vegetables, cotton, tobacco, flour, meal and other provisions.

Fifty-Seventh—To regulate the construction, repairs and use of vaults, cisterns, areas, hydrants, pumps, sewers and gutters.

Sixty-First—To prescribe the thickness, strength, and manner of constructing stone, brick, and other buildings, and construction of fire-escapes therein.

Seventy-Fifth—To declare what shall be a nuisance and abate the same; and to impose fines upon parties who may create, continue or suffer nuisances to exist.

Seventy-Sixth—To appoint a board of health and prescribe its powers and duties.

Seventy-Seventh—To erect and establish hospitals and medical dispensaries, and control and regulate the same.

Seventy-Eighth—To do all acts, make all regulations which may be necessary or expedient for the promotion of health or the suppression of disease.

Seventy-Ninth—To establish and regulate cemeteries within or without the corporation, and acquire lands therefor by purchase or otherwise, and cause cemeteries to be removed, and prohibit their establishment within one mile of the corporation.

Eighty-First—To direct the location and regulate the management and construction of packing-houses, renderies, tallow-chandleries, bone factories, soap-factories and tanneries, within the limits of the city or village, and within the distance of one mile without the city or village limits.

Eighty-Second—To direct the location and regulate the use and construction of breweries, distilleries, livery stables, blacksmith shops and founderies within the limits of the city or village.

Eighty-Third—To prohibit any offensive or unwholesome business or establishment within, or within one mile of, the limits of the corporation.

Eighty-Fourth—To compel the owner of any grocery, cellar, soap- or tallow-chandlery, tannery, stable, pig-sty, privy, sewer or other unwholesome or nauseous house or place to cleanse, abate or remove the same, and to regulate the location thereof.

Ninety-Sixth—To pass all ordinances, rules, and make all regulations, proper or necessary to carry into effect the powers granted to cities or villages, with such fines or penalties as the city council or board of trustees shall deem proper: *Provided*, no fine or penalty shall exceed \$200, and no imprisonment shall exceed six months, for one offense.

Territorial Jurisdiction:

THE city council and board of trustees shall also have jurisdiction in and over all places within one-half mile of the city or village limits, for the purpose of enforcing health and quarantine ordinances and regulations thereof.—*Revised Statutes*, Chap. 24, Sec. 44.

Jurisdiction Over Waters:

AN Act to define the jurisdiction of the cities and incorporated towns bordering on the Ohio river. [Approved March 26, 1872. In force July 1, 1872.]

SECTION 1. *Be it enacted by the People of the State of Illinois, represented in the General Assembly*, That each of the several cities and incorporated towns of this State, lying on the Ohio river, and bounded thereby, are hereby invested with jurisdiction over their river fronts, and shall have jurisdiction over the waters of the said river in all cases occurring on said river, and opposite to each of said cities or incorporated towns, co-extensive with the jurisdiction of the several counties in this State in which said cities or incorporated towns may lie: *Provided*, nothing herein contained shall be construed so as to extend the jurisdiction of said cities or incorporated towns over any island in said river included within the corporate limits of any county of the State of Kentucky.

Medical Health Officer:

WHILE other members of a board of health may be non-medical men—citizens, selected for their general intelligence, public spirit, and direct interest in the welfare and prosperity of the locality, and to whom, therefore, the general direction of measures for the protection of the public health may be safely and properly entrusted—the Medical Health Officer, the member *ex officio*, should be a thoroughly educated physician, practically versed in sanitary matters, and skilled in the diagnosis and management of contagious and infectious diseases. Upon his technical knowledge, his wisdom and discretion, and his executive ability, largely depend the efficiency of the board and its success or failure in the prevention of disease and the promotion of health.

He should be one who can command the fullest confidence and respect of the community, and upon whose counsel and advice his fellow-members may implicitly

rely. Health boards are necessarily endowed with large discretionary powers—the preservation of the public health being rightly deemed a matter of supreme importance; and courts sustain them, to the fullest extent, in the exercise of these powers whenever it can be shown that their action was guided by a sound discretion, and was deemed necessary for the public welfare. It is, therefore, incumbent upon such boards that they be well and intelligently advised; and for such advice it will be true economy to make adequate compensation. These considerations should be taken into account in appointing, and in fixing the rate of pay of, the Medical Health Officer.

Township Board of Health:

CHAPTER 139, Article XIV, of the Revised Statutes, provides that—

1. The supervisor, assessor and town clerk of every town shall constitute a board of health, and on the breaking out of any contagious disease in their town or immediate vicinity, they shall power have to make and enforce any rules and regulations tending to check the spread of such disease within the limits of such town, as they may think proper; and for this purpose they shall have power to shut up any house or place where any infected persons may be, and cause notices of warning to be put thereon, or remove such persons to any pest house within the limits of said town, at the expense of the party so moved, if he be of sufficient ability to pay, or otherwise at the expense of said town: *Provided*, that nothing in this section shall apply to any town, or part thereof, lying within the corporate limits of any incorporated city or village.—[L. 1865, p. 75, § 1.]

2. The town clerk shall keep a full record of all the doings of said board and report the same to the annual meeting of such town.—[L. 1865, p. 76, § 2.]

3. The members of said board shall be allowed for their time spent in the performance of their said duties the sum of \$1.50 per day, which, together with all bills by them contracted, and all sums of money by them expended shall be audited by the board of auditors of such town, and be paid in the same manner as other town expenses.—[L. 1865, p. 76, § 2.]

Nuisances:

SECTION 221, Chapter 38, of the Criminal Code, declares that it is a public nuisance:

1. To cause or suffer the carcass of any animal or any offal, filth or noisome substance to be collected, deposited or to remain in any place, to the prejudice of others.

2. To throw or deposit any offal or other offensive matter, or the carcass of any dead animal, in any water-course, lake, pond, spring, well or common sewer, street, bridge or public highway.

3. To corrupt or render unwholesome or impure the water of any spring, river, pond or lake, to the injury or prejudice of others.

4. To obstruct or impede, without legal authority, the passage of any navigable river or waters.

5. To obstruct or encroach upon public highways, private ways, streets, alleys, commons, landing-places, and ways to burying-places.

6. To carry on the business of manufacturing gunpowder, nitro-glycerine, or other highly explosive substances, or mixing or grinding the materials therefor, in

any building within twenty rods of any valuable building erected at the time such business may be commenced.

7. To establish powder magazines near incorporated towns, at a point different from that appointed according to law by the corporate authorities of the town, or within fifty rods of any occupied dwelling-house.

8. To erect, continue or use any building or other place for the exercise of any trade, employment or manufacture which, by occasioning noxious exhalations, offensive smells, or otherwise, is offensive or dangerous to the health of individuals, or of the public.

9. To advertise wares or occupation by painting notices of the same on, or affixing them to, fences or other private property, or on rocks or other natural objects, without the consent of the owner; or, if in the highway or other public place, without permission of the proper authorities: *Provided*, that nothing in this section shall be construed to prevent the municipal authorities of any incorporated city, town or village from declaring what shall be nuisances, and abating the same within their limits.

SEC. 222. Whoever causes, erects or continues any such nuisance shall, for the first offense, be fined not exceeding \$100, and for a subsequent offense shall be fined in a like amount, and confined in the county jail not exceeding three months. Every such nuisance, when a conviction therefor is had in a court of record, may, by order of the court before which the conviction is had, be abated by the sheriff or other proper officer, at the expense of the defendant, and it shall be no defense to any proceeding under this section, that the nuisance is erected or continued by virtue or permission of any law of this State.

WHILE there can be no question as to the right and duty of a board of health to cause the summary abatement of a nuisance arising from any one of the first three causes specified in the form for an ordinance, it should be remembered that these are patent and obvious nuisances, concerning the nature of which there can be no difference of opinion; and that this may or not be the case in the remaining items (4 to 8 inclusive,) of the Section above quoted from the Criminal Code. What is not a nuisance in itself can not be abated by a board of health, until it is adjudged to be so employed as to be inimical to public health or safety. Any classification of nuisances, says the Hon. Leroy Parker, of the Michigan State Board of Health, will be necessarily imperfect; yet for the purposes of this subject it may be said that public-health nuisances are of two kinds:

1. Those which are such from their very nature; which cannot exist in the vicinity of habitations without causing offense to the senses and injury to the health; such, for instance, as exposed and decayed carcasses of dead animals, or accumulations of offal or of fecal matter in exposed places.

2. Those which become nuisances by reason of misuse or negligent care exercised of an otherwise harmless and perfectly lawful object, business or occupation; as, for example, slaughter-houses, rendering-establishments, mill-ponds or burying-grounds.

The methods of procedure to be adopted for the removal of any nuisance will vary according as the nuisance to be abated comes within one or the other of these

classifications. If the danger to the public health is imminent, and safety requires the immediate suppression of the nuisance, the board of health, and any individual affected thereby, would be protected if they should proceed at once to suppress it, for the safety of the people is the highest law. If any unhealthy nuisance is found in a public place, it would be the duty of the board to see to its removal. On the other hand, a mill-pond, a slaughter-house or a burial-ground are not necessarily offensive or unhealthy, and their use is perfectly legal. It is only their misuse that makes them a nuisance. A mill-pond may be maintained in the midst of a thickly populated community without being in the slightest degree detrimental to the public health. A slaughter-house may be conducted with such perfect cleanliness as to be no more offensive in a sanitary sense than a planing-mill. Whether a business or a thing not in itself a nuisance is so managed or suffered to exist as to be a nuisance, is a fact which must be determined by the courts, upon evidence. A board of health cannot decide that to be a nuisance which is not so in itself. Only upon the judgment of a court of competent jurisdiction can a board of health legally ascertain whether a business is a nuisance, so as to authorize them to abate it. Of course, any collection of offal or filth about a slaughter-house may be removed by a board of health under the authority conferred on it by the statutes; but the suppression of the business itself can only follow a judicial determination that it is so conducted as to be injurious to the public health.

It would be well for the members of every board of health to acquaint themselves as fully as possible with all the facts relating to any existing nuisance or thing which may become a nuisance within their jurisdiction, and apply to these facts the existing law, and thus ascertain in what way they shall proceed to prevent or remove the same. Misdirected zeal is sometimes as harmful as lack of zeal. Therefore, in cases involving doubt it is always advisable to take legal counsel before proceeding to extreme measures.

Food-Supply:

ADULTERATION OF FOOD, LIQUOR, CANDIES OR MEDICINE.—Chapter 38, Division I., of the Criminal Code, provides that—

§ 7. Whoever fraudulently adulterates, for the purpose of sale, bread or any other substance intended for food, or any candy or confection, with any substance which is poisonous or injurious to health, and whoever sells or offers or keeps for sale any adulterated bread or other substance intended for food, or candy or confection, knowing the same to be so adulterated, or shall sell or offer to sell or keeps for sale any flesh of any diseased animal, or other corrupt or unwholesome provision, shall be confined in the county jail not exceeding one year, or be fined not exceeding \$1,000, or both, in the discretion of the Court.

§ 8. Whoever adulterates, for the purpose of sale, any liquor used or intended for drink, with cocculus indicus, vitriol, grains of paradise, opium, alum, copperas, laurel-water, logwood, Brazil wood, cochineal, sugar of lead, or any other substance which is poisonous or injurious to health, and whoever sells or offers or keeps for sale any such liquor so adulterated, shall be confined in the county jail not exceeding one year, or fined not exceeding \$1,000, or both.

§ 10. Whoever fraudulently adulterates, for the purpose of sale, any drug or medicine, or sells or offers or keeps for sale any fraudulently adulterated drug or

medicine, knowing the same to be adulterated, shall be confined in the county jail not exceeding one year, or fined not exceeding \$1,000, and such adulterated drugs and medicine shall be forfeited and destroyed.

§ 62. Every druggist or other person who shall sell and deliver any arsenic, strychnine, corrosive sublimate, prussic acid, or other substance or liquid usually denominated as poisonous, without having the word "poison" written or printed upon a label attached to the phial or parcel in which such drug is contained, or shall sell and deliver any drug or medicine other than upon the prescription of a physician, without having the name of such drug or medicine printed or written upon a label attached to the phial or parcel containing the same, shall be fined not exceeding \$25.

§ 63. If any druggist or other person sells or gives away any arsenic, strychnine, corrosive sublimate or prussic acid without the written prescription of a physician, and fails to keep a record of the date of such sale or gift, the article, and amount thereof sold or given away, and the person to whom delivered, he shall be fined not exceeding \$50 for each neglect. Whoever purchases any such poison and gives a false or fictitious name, shall be punished in the same manner.

ADULTERATION OF ARTICLES OF FOOD, DRINK OR MEDICINE.—An Act to prevent and punish the adulteration of articles of food, drink and medicine, and the sale thereof when adulterated.

Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly, That no person shall mix, color, stain or powder, or order or permit any other person in his or her employ to mix, color, stain or powder any article of food with any ingredient or material, so as to render the article injurious to health, or depreciate the value thereof, with intent that the same shall be sold; and no person shall sell or offer for sale any such article so mixed, colored, stained or powdered.

§ 2. No person shall, except for the purpose of compounding in the necessary preparation of medicine, mix, color, stain or powder, or order or permit any other person to mix, color, stain or powder any drug or medicine with any ingredient or material, so as to affect injuriously the quality or potency of such drug or medicine, with intent to sell the same, or shall sell or offer for sale any such drug or medicine so mixed, colored, stained or powdered.

§ 3. No person shall mix, color, stain or powder any article of food, drink or medicine, or any article which enters into the composition of food, drink or medicine, with any other ingredient or material, whether injurious to health or not, for the purpose of gain or profit, or sell or offer the same for sale, or order or permit any person to sell or offer for sale any article so mixed, colored, stained or powdered, unless the same be so manufactured, used or sold, or offered for sale under its true and appropriate name, and notice that the same is mixed or impure is marked, printed or stamped upon each package, roll, parcel or vessel containing the same, so as to be and remain at all times readily visible, or unless the person purchasing the same is fully informed by the seller of the true name and ingredients (if other than such as are known by the common name thereof) of such articles of food drink or medicine, at the time of making sale thereof or offering to sell the same.

§ 4. No person shall mix oleomargarine, suine, butterine, beef-fat, lard, or any other foreign substance, with any butter or cheese intended for human food, without distinctly marking, stamping or labeling the article, or the package containing the same, with the true and appropriate name of such article, and the percentage in which such oleomargarine or suine enters into its composition; nor shall any person sell or offer for sale, or order or permit to be sold or offered for sale, any such article of food into the composition of which oleomargarine has entered, without at the same time informing the buyer of the fact and the proportions in which such oleomargarine, suine, or butterine, beef-fat, lard, or any other foreign substance has entered into its composition: *Provided*, that nothing in this act shall be so construed as to prevent the use of harmless coloring-matter in butter and cheese, or other articles of food.

§ 5. Any person convicted of violating any provision of any of the foregoing sections of this act shall, for the first offense, be fined not less than twenty-five dollars (§25), nor more than two hundred dollars (§200); for the second offense he shall be fined not less than one hundred dollars (§100), nor more than two hundred dollars (§200), or be confined in the county jail not less than one month nor more than six months, or both, at the discretion of the court; and for the third and all subsequent offenses he shall be fined not less than five hundred dollars (§500), nor more than two thousand dollars (§2,000), and imprisoned in the penitentiary not less than one year nor more than five years.

§ 6. No person shall be convicted under any of the foregoing sections of this act if he shows to the satisfaction of the court or jury that he did not know that he was violating any of the provisions of this act, and that he could not, with reasonable diligence, have obtained the knowledge.

§ 7. The State's attorneys of this State are charged with the enforcement of act, and it is hereby made their duty to appear for the people and to attend to the prosecution of all complaints under this act, in their respective counties, in all courts.

§ 8. All acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

MILK.—An Act to regulate the sale of milk, and to provide penalties for the adulteration thereof. Approved May 28, 1879. In force July 1, 1879.

Section 1. Be it enacted by the People of the State of Illinois, represented the General Assembly, That whoever shall, for the purpose of sale for human food, adulterate milk with water or any foreign substance, or whoever shall knowingly sell for human food, milk from which cream has been taken, without the purchaser thereof being informed or knowing the fact, or whoever shall knowingly sell for human food, milk from which what is commonly called "strippings" has been withheld, without the purchaser thereof being informed or knowing the fact, or whoever shall knowingly sell for human food milk drawn from a diseased cow, knowing her to be so diseased as to render her milk unwholesome, or whoever shall knowingly sell for human food, milk so tainted or corrupted as to be unwholesome, or whoever shall knowingly supply, or bring to be manufactured into any substance for human food, to any cheese- or butter-factory or creamery, without all interested therein knowing or being informed of the fact, milk which is adulterated with water

or any foreign substance, or milk from which cream has been taken, or milk from which what is commonly called "strippings" has been withheld, or milk drawn from a diseased cow, knowing her to be so diseased as to injure her milk, or milk so tainted or corrupted as to be unwholesome, or whoever shall knowingly, with intent to defraud, take from milk after it has been delivered to a cheese-factory, or butter-factory, or creamery, to be manufactured into any substance for human food, for or on account of the person supplying the milk or cream, or shall, with like intent, knowingly add any foreign substance to the milk or cream, whereby it or the products thereof shall become unwholesome for human food, shall be guilty of a misdemeanor, and for each and every such misdemeanor shall be fined not less than twenty-five (25) nor more than one hundred dollars (\$100) or confined in the county jail not exceeding six (6) months, or both, in the discretion of the court.

§ 2. Any person who shall adulterate milk, with the view of offering the same for sale or exchange, or shall keep cows for the production of milk for market, or for sale or exchange, in an unhealthy condition, or knowingly feed the same on food that produces impure, diseased, or unwholesome milk, shall be deemed guilty of a misdemeanor, and on conviction, shall be punished by a fine of not less than fifty dollars (\$50), nor more than two hundred dollars (\$200), for each and every offense.

§ 3. Any person or persons who shall in any of the cities of this State, engage in or carry on a retail business in the sale, exchange of, or any retail traffic in milk, shall have each and every can in which the milk is carried or exposed for sale or exchange, and the carriage or vehicle from which the same is vended, conspicuously marked with his, her, or their name or names, also indicating by said mark the locality from which said milk is obtained or produced, and for every neglect of such marking, the person or persons so neglecting shall be subject to the penalties expressed in section two of this act, but for every violation of this act, by so marking said cans carriage or vehicle, as to convey the idea that said milk is produced or procured from a different locality than it really is, the person or persons so offending shall be subject to a fine of one hundred dollars (\$100).

§ 4. Any person who shall, in any of the cities in this State, offer for sale any milk from which the cream or any part thereof shall have been taken, shall offer for sale and sell the same as skimmed milk, and not otherwise, and shall have each can or vessel in which such milk is carried, or exposed for sale, plainly and conspicuously marked with the words, "Skimmed Milk." Any person violating this section shall be subject to a fine not exceeding fifty dollars (\$50) for each and ever, violation.

§ 5. Upon the rendition of judgment imposing a fine as provided in the foregoing sections, it shall be the duty of the justice of the peace or other court rendering said judgment, also to render a judgment for the costs, and forthwith to issue a *capias* or warrant of commitment against the body of the defendant, commanding that, unless the said fines and costs be forthwith paid, the defendant shall be committed to the jail of the county, and the constable or other officer to whose hands said *capias* or warrant shall come, shall, in default of such payment, arrest the defendant and commit him to the jail of the county, there to remain, as provided by section

308 of "An act to revise the law in relation to criminal jurisprudence," in force July 1, 1874; unless such fine and costs shall sooner be paid.

§ 6. The addition of water or any foreign substance to milk or cream intended for sale or exchange, is hereby declared an adulteration. Any milk that is obtained from cows fed on distillery waste, usually called "swill," or upon any substance in a state of putrefaction, is hereby declared to be impure and unwholesome. Nothing in this act shall be construed to prevent the addition of sugar in the manufacture of condensed or preserved milk.

§ 7. Section nine (9) of division one (1) of an act entitled "An act to revise the law in relation to criminal jurisprudence," (approved March 27, 1874,) and all other acts and parts of acts inconsistent herewith are hereby repealed.

BUTTER AND CHEESE.—An Act to prevent frauds in the manufacture and sale of butter and cheese. Approved May 31, 1879. In force July 1, 1879.

Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly. That whoever manufactures, sells, or offers for sale, or causes the same to be done, any substance purporting to be butter or cheese, or having the semblance of butter or cheese, which substance is not made wholly from pure cream or pure milk, unless the same be manufactured under its true and appropriate name, and unless each package, roll or parcel of substance, and each vessel containing one or more packages of such substance, have distinctly and durably painted, stamped or marked thereon the true and appropriate name of such substance, in ordinary bold-faced capital letters not less than five-lines pica, shall be punished as provided in section three of this act.

§ 2. Whoever shall sell any such substance as is mentioned in section one of this act, to consumers, or cause the same to be done, without delivering with each package, roll or parcel so sold, a label on which is plainly and legibly printed, in Roman letters, the true and appropriate name of such substance, shall be punished as is provided in section three of this act.

§ 3. Whoever knowingly violates section one, or section two of this act, shall be fined in any sum not less than ten nor more than three hundred dollars, or imprisoned in the county jail not less than ten nor more than ninety days, or both, in the discretion of the court; *Provided*, that nothing contained in this act shall be construed to prevent the use of skimmed milk, salt rennet, or harmless coloring matter, in the manufacture of butter or cheese.

BUTTER AND CHEESE.—An Act to prevent the adulteration of butter and cheese, or the manufacture or sale of any article as a substitute for butter or cheese, or any article to be used as butter and cheese. Approved June 1, 1881.

Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly, That whoever manufactures out of any oleaginous substances, or any compound of the same other than that produced from unadulterated milk, or cream from the same, any article designed to take the place of butter or cheese produced from pure, unadulterated milk, or cream of the same, and shall sell, or offer for sale, the same as butter or cheese, or give to any person the same as an article of food, as butter or cheese, shall on conviction thereof, be fined not less than twenty-five dollars (\$25) nor more than two hundred dollars (\$200).

§ 2. All acts or parts of acts inconsistent with this act are hereby repealed.

VINEGAR.—An Act to prevent the adulteration of vinegar, and to prevent fraud and imposition in the manufacture and sale of vinegar, and to protect the purchasers thereof. Approved June 14, 1883.

Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly, That every person who shall manufacture for sale, or shall offer or expose for sale, as cider vinegar, any vinegar not the legitimate product of pure apple juice, known as apple cider, and not made exclusively of said apple cider, shall, for each such offense, be punished by a fine of not less than twenty-five dollars (\$25) nor more than fifty dollars (\$50).

§ 2. Every person who shall manufacture for sale, or who shall offer or expose for sale, any vinegar found upon test to contain any preparation of lead, copper, sulphuric acid or other ingredients injurious to health, shall, for each such offense, be punished by a fine of not less than one hundred dollars (\$100).

Water-Supply:

SECTION 1. The city council or board of trustees shall have the power to provide for a supply of water by the boring and sinking of artesian wells, or by the construction and regulation of wells, pumps, cisterns, reservoirs, or water-works, and to borrow money therefor, and to authorize any person or private corporation to contract and maintain the same, at such rates as may be fixed by ordinance, and for a period not exceeding thirty years; also to prevent the unnecessary waste of water; to prevent the pollution of the water, and injuries to such wells, pumps, cisterns, reservoirs or water-works.

§ 2 For the purpose of establishing or supplying water works, any city or village may go beyond its territorial limits, and may take, hold and acquire property by purchase or otherwise; and shall have power to take and condemn all necessary lands or property therefor, in the manner provided for the taking or injuring private property for public uses; and the jurisdiction of the city or village to prevent or punish any pollution or injury to the stream or source of water, or to such water-works, shall extend five miles beyond its corporate limits, or so far as such water-works may extend.—[*Revised Statutes, Chapter 24, Article X.*]

WATER-WORKS.—An Act to amend section one (1) of an act entitled “An act authorizing cities, incorporated towns and villages to construct and maintain water-works,” approved and in force April 15, 1873. Approved and in force May 1879.

Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly, That section one (1) of an act entitled, “An Act authorizing cities, incorporated towns and villages to construct and maintain water works,” approved and in force April 15, 1873, be and is hereby amended so as to read as follows:

§ 1. That all cities, incorporated towns and villages in this State be and are hereby authorized and shall have power to provide for a supply of water for the purposes of fire protection, and for the use of the inhabitants of such cities, incorporated towns or villages, by the erection, construction and maintaining of a system of water works or by uniting with any adjacent city, incorporated town or village, in the erection, construction and maintaining of a system of water-works for the joint use

of such cities, incorporated towns or villages, or by procuring such supply of water from any adjacent city, incorporated town or village already having water-works. *Provided*, That all contracts for the erection or construction of such works, or any part thereof, shall be let to the lowest responsible bidder therefor, upon not less than three (3) weeks public notice, of the terms and conditions upon which the contract is to be let, having been given by publication in a newspaper published in such city, town or village; or if no newspaper is published therein, then in some newspaper published in the county. *And provided further*, That no member of the city council, or board of trustees or mayor, shall be directly or indirectly interested in any such contract, and in all cases the council or board of trustees, as the case may be, shall have the right to reject any and all bids that may not be satisfactory to them.

Whereas, An emergency exists, therefore this act shall be in force from and after its passage.

* SOURCE OF SUPPLY MAY BE CHANGED.—An Act to aid cities owning or operating water-works to secure an additional or better supply of pure water. Approved May 27, 1881.

Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly, That all cities owning or operating water-works under any charter granted by act of any general assembly of this State, or under the general incorporation laws of this State, whether by boards of water commissioners or by officers appointed for that purpose, are hereby granted the following powers and privileges, for the purpose of increasing or bettering the source of supply from which such water is obtained.

§ 2. Whenever, in the judgment of a majority of any board of water commissioners, or if there be no such board, then in the judgment of a majority of the city council of any city owning or operating such water-works, it shall be necessary for the public health, or for any other cause, to increase the source of water-supply, or to substitute for it such better source as, in their judgment, the interests of such city may demand, such board of water commissioners or city council may, in addition to the powers already conferred upon them by act of any general assembly of this State construct wells, either by boring or excavation, and protect and equip the same after construction, or may lease water-privileges from private parties or corporations owning wells already or hereafter to be constructed, and may pay for such construction or lease, and for the expenses maintained in operating the same, out of any earnings of such water-works under their control which may be in their hands at the time of the taking effect of this act, or which may accrue to them hereafter: *Provided*, That no money shall be expended under the provisions of this act, for the purposes herein specified, until the question of the expenditure of such money for the purposes aforesaid shall have been submitted to a vote of the people of the city in which such water-works may be situated, at any election for city officers or special election called for that purpose by the city council of said city, and shall have received a majority of the votes cast at such election: *Provided further*, That no money shall be expended under the provisions of this act, for the purposes aforesaid, other than the surplus earnings of such water-works.

§ 3. Whereas an emergency exists, this act shall be in force from and after its passage.

Sewerage:

CONTRACT FOR SEWERAGE.—An Act to enable cities, towns and villages to contract with each other for sewerage. Approved May 14, 1879. In force July 1, 1879.

Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly, That whenever any city, or incorporated town or village, shall be adjacent or contiguous to any other city or incorporated town or village, they shall be authorized to contract with each other upon such terms as may be agreed upon between them, to allow and permit the one the use and benefit of any sewer or drain, or of any system of sewerage or drainage heretofore constructed, or which may be hereafter constructed by the other; and further, that any such sewer or drain, or system of sewerage or drainage, constructed or which may hereafter be constructed by the one, may be extended or furnished to the inhabitants of the other, and they may by contract with each other provide for the joint construction of any sewer or drain by the municipalities so contracting, and for the common use thereof by the inhabitants of such municipalities.

§ 2. The contract contemplated in section one of this act may be made by ordinance or resolution duly enacted or passed by the common council, board of trustees, or other proper legislative authority of the city, or incorporated town or village proposing such contract, and ratified or assented to by ordinance or resolution duly enacted or passed by the common council, board of trustees, or other proper legislative authority of the city or incorporated town or village confirming or agreeing to such contract, and every such contract, when ratified or confirmed by the proper corporate authorities of the municipal corporations who are parties thereto, shall be in all respects valid and binding.

Public Buildings:

TO REGULATE MEANS OF EGRESS.—*Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly,* That all public buildings now in process of construction, or hereafter to be built or constructed, which may or shall be used for churches, school-houses, operas, theatres, lecture-rooms, hotels, public meetings, town-halls, or which may or shall be used for any purpose whereby a collection of people may be assembled together for religious worship, amusement or instruction, shall be so built and constructed that all doors leading from the main hall or place where said collection of people may be assembled, or from the principal room which may be used for any of the purposes aforesaid, shall open outward; and that all means of egress from the building shall be by means of doors which shall open outward from the main hall or building.

§ 2. That any person or persons who shall fail or refuse to comply with the provisions of this act shall be fined in any sum not less than \$100, nor more than \$1,000.

§ 3. That in all cities and towns having a population of two thousand inhabitants, and upwards, the mayor or other corporate authority of said town or city, shall be empowered, and is hereby authorized, to close and prohibit all public buildings hereafter erected, from being used in violation of this act.

In force July 1, 1874.

Diseases of Animals:

SECTION 258, of the first division of the Criminal Code (Chap. 38, Revised Statutes,) provides that any person who shall knowingly and willfully bring, or cause to be brought, into this State any sheep or other domestic animal infected with contagious disease, or who shall knowingly and willfully suffer or permit sheep or other domestic animals infected with contagious disease to run at large, shall be fined in any sum not exceeding \$100, and shall be liable in a civil action for all damages occasioned thereby.

AN Act of the 32d General Assembly, approved May 31, 1881, creates the office of State Veterinarian, whose duty it is to investigate any and all cases of contagious or infectious disease among domestic animals of the bovine species in this State. It provides for the quarantine and slaughter of animals in case of an epidemic—Sec. 2; for the appraisement of slaughtered animals—Sec. 3; for the prohibition of the importation of cattle from infected localities—Sec. 4; for penalties for neglecting to report contagious diseases—Sec. 5; for official reports by the State Veterinarian—Sec. 6; for payment of claims for slaughtered animals—Sec. 7; for the compensation of the State Veterinarian and for appraisers' and physicians' fees,—Sec. 8; and appropriates \$8,000 as a contingent fund for the purposes set forth.

This Act was amended by the 33d General Assembly, by making all its provisions, rules, regulations, requirements, fees, salaries and penalties, apply to the suppression and prevention of contagious or infectious glanders among horses, mules and asses; \$10,000 was appropriated for the purposes of the act, \$3,000 of which is to be used as a contingent fund at the discretion of the State Veterinarian.

In addition to these two, which are still in force, the ravages of that form of anthrax known as the Texas, or Spanish, or splenic fever, led to the passage, in 1867, of an Act to prevent the introduction of Texas or Cherokee cattle into Illinois. This, being found imperfect, was amended in 1869, so as to allow their introduction between October 1 and March 1 of each year; but, after the constitutionality of the amended act had been twice affirmed in the State courts (Yeazel v. Alexander, 58 Ill., 254, and Stevens v. Brown, 58 Ill., 289.) the United States Supreme Court held that a similar law of Missouri was repugnant to the Federal Constitution, and overruled the Illinois decisions (Railroad Co. v. Husen, 5 Otto, 465.) The Act was thereupon declared to be unconstitutional by the Illinois Supreme Court in the cases of Salzenstein v. Marvis, 91 Ill. 391; C. & A. R. R. Co. v. Erickson, 91 Ill. 613, and Jarvis v. Riffin, 94 Ill. 164; and has since been a dead letter.

Circular-Letter Concerning Burial Permits:

OFFICE OF THE SECRETARY, SPRINGFIELD, JULY 15, 1882.

DEAR SIR:

At a regular meeting of the STATE BOARD OF HEALTH, held April 13-15, 1882, the following resolution was adopted:

Resolved, That in order to protect the legal interests of survivors, to facilitate the detection of crime, and to secure fuller and more accurate knowledge of the causes of mortality, whereby preventive medicine and general sanitation may be promoted, the ILLINOIS STATE BOARD OF HEALTH earnestly recommends to the proper authorities of all cities and towns in this State, having populations of one thousand or over, the enactment and enforcement of a suitable ordinance requiring a burial permit from a designated official, and based upon the physician's certificate of

death *now required by the statute*, as a condition precedent to interment within, or removal of a decedent without, the corporate limits of any such city or town.

A form of such ordinance is herewith presented, and it is hoped you may be able to secure its enactment.

It should be observed that wherever such an ordinance is adopted the certifying physician is relieved of the necessity of transmitting his certificates direct to the county clerk, but will simply return them to the designated city or town official, who will forward them to the county clerk after using them as the basis for the burial permit. This has been found to work well practically in places where burial permits are required. It helps to secure a more general compliance with the law requiring physicians to report all deaths occurring under their supervision with certificates of the causes thereof.

The manifest object of the State law is to secure such knowledge of the causes of mortality as may lead to measures for removing or modifying such causes as are susceptible of removal or modification. This is of primary importance to cities and towns, since a reputation for healthfulness or the reverse undoubtedly influences the growth and prosperity of any given locality. By means of the burial permit and its record the facts contained in the physician's certificate may be made immediately available for this purpose, while they cannot be where returned direct to the county clerk. From the "sailable book," prescribed in the ordinance, a weekly or monthly report may be compiled for publication, either in the newspaper press or otherwise, and thus the condition of, and the influences affecting, the public health may be accurately judged at any given time, and comparison made with other localities.

Where burial permits are required—as they are in many places—the existence of a contagious disease—as small-pox, scarlet fever, diphtheria—has often first been made known by the information given in the permit, which thus serves to direct preventive measures for arresting further spread of the contagion.

On the other hand, in the absence of a burial permit many evils arise, among which may be mentioned the fact that the bodies of murdered persons may be more easily disposed of. Within a very brief period three such instances have come to the Secretary's knowledge where the bodies of the victims were buried without exciting suspicion. Accidental clues led to disinterment and discovery of the crimes.

Briefly, the reasons for the enactment of such an ordinance may be thus summarized:

First.—It will be of value in securing fuller, more accurate, and more readily available knowledge of the causes of death—a knowledge which is absolutely necessary to the profitable application of efforts for the preservation of health, the limitation of disease and the prolongation of human life.

Second.—It will be of value in the protection of life against criminal violence, by facilitating the detection of such violence through preventing the burial of victims of homicide, abortion, poisoning, etc., without proper investigation.

Third.—It will be of value in the protection of property interests, by making the facts pertaining to a death and burial matters of record which may be useful in probating wills, settling estates, determining heirships, perfecting letters, adjusting life insurance and kindred matters.

THE following is the form of Permit in use:—

BURIAL PERMIT NO.....

Office of [City or Town Clerk, or other Officer.]

[Name of Place.]

Permission is hereby given.....to remove
for interment, the remains of.....
Date of Death:.....188.. Age:years,months,days.
Place of Death:
Cause of Death:
Medical Attendant:

[Official Title of Person issuing.]

[Stub or Counterfoils to be retained.]

BURIAL PERMIT NO.....

[Name of Place.]

Name of188..
Deceased:
Age:years,months,days.
Sex: Color:
Date of Death:188..
Place of Death:
Cause of Death:
Medical Attendant:
Place of Interment:.....
Issued to.....

Transportation of Corpses:

RULES FOR THE TRANSPORTATION OF CORPSES BY RAILROADS AND STEAMBOATS IN THE STATE OF ILLINOIS.—*Rule 1.* The transportation of persons who have died of Small-Pox, Asiatic Cholera or Yellow Fever, is absolutely forbidden.

Rule 2. From November 15th to March 15th, all dead bodies may be transported without restriction, excepting the bodies of those who have died of Diphtheria, Scarlet Fever, Typhus, Typhoid Fever, Small-Pox, Asiatic Cholera, or Yellow Fever.

Rule 3. The bodies of those who have died of Diphtheria, Scarlet Fever, Typhus or Typhoid Fever, *at all times*, and all bodies presented for transportation, *from March 15th to November 15th*, must be closely wrapped in a disinfectant cerecloth, placed in a metallic or wooden coffin, and this enclosed by a tight wooden box.

Rule 4. Every dead body must be accompanied by (1) a Physician's Certificate, showing cause of death, or a Certificate of Inquest from the Coroner, or a Permit for Transportation (stating cause of death,) from the Clerk of the Local Board of Health; And (2) a written Certificate from the Shipping Undertaker, that the corpse has been prepared for transportation in accordance with the foregoing rules of the ILLINOIS STATE BOARD OF HEALTH.

OFFICIAL:

JOHN H. RAUCH, *Secretary.*

Cemeteries:

AN Act in relation to the control of public graveyards. Approved May 29, 1879. In force July 1, 1879:

Section 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly, That public graveyards in this State, not under the control of any corporation, sole organization, or society, and located within the limits of cities, villages, towns, townships or counties not under township organization, shall and may be controlled or vacated by the corporate authorities of such city, village, town, township or county, in such manner as such authorities may deem proper, and in the case of towns, such control may be vested in three trustees, to be elected annually by the voters of such town at the annual town meeting therein.

See also POWERS OF CITY COUNCILS AND VILLAGE BOARDS: Item *Seventy-ninth*.

Contagious and Infectious Diseases:

THE following *Rules and Regulations of the ILLINOIS STATE BOARD OF HEALTH, Concerning Contagious and Infectious Diseases*, are applicable to Small-Pox, Diphtheria, Scarlet Fever, Typhoid Fever, Asiatic Cholera and Yellow Fever; and their enforcement and observance are enjoined upon all local health authorities.

1. *Isolation and Quarantine.*—Whenever it is known that any person is sick with small-pox or varioloid, diphtheria, scarlet fever, typhoid fever, Asiatic cholera or yellow fever, isolation of the individual must be promptly and rigidly enforced. The local authorities must be at once notified of the existence of the case by the householder in whose dwelling the case occurs, and of its exact locality.

2. *Duties of Health Authorities.*—Immediately upon receipt of such notice, the medical health officer should visit the locality and secure prompt compliance with the precautions herein set forth. He should see that the proper placards are duly posted; and, through the sanitary policeman, or otherwise, should notify the schools; take charge of funerals of those dying of the disease; superintend the disinfection of rooms, clothing and premises; and, finally, give official certificates of recovery, and of freedom from liability to communicate the disease to others. Until these latter are issued, a rigid system of isolation or quarantine should be maintained with regard to an infected house and its contents—persons and things.

Where there is no medical health officer, the attending physician should see that these precautions are carried out.

3. *The Sick-Room.*—The room selected for the sick should be large, easily ventilated, and as far from the living- and sleeping-

rooms of other members of the family as it is practicable to have it. All ornaments, carpets, drapery, and articles not absolutely needed in the room, should be removed. A free circulation of air from without should be admitted both night and day—there is no better disinfectant than pure air. Place the bed as near as possible in the middle of the room; but care should, of course, be taken to keep the patient out of draughts.

If the room connects with others which must be occupied, lock all but one door for entrance and exit, and fasten to the door-frame—top, bottom and sides—sheets of cheap cotton cloth, kept wet with *Thymol Water* (see page 37) or chloride of zinc solution—two drachms chloride of zinc to a half gallon of water. Over the door to be used, the sheet must not be tacked at the bottom, nor along the full length of the lock-side of the frame, but about five feet may be left free to be pushed aside; this sheet, however, must be long enough to allow ten or twelve inches to lie in folds on the floor, and must, also, be kept wet with the disinfectant.

4. *Precautions in the Sick-Room.*—All discharges from the nose and mouth of the patient should be received on rags and immediately burned, or should be received in vessels containing a sufficient quantity of the *Zinc Disinfectant* (see page 37.) Night-vessels should be kept supplied with a pint or so of the *Copperas Disinfectant* (see page 37) into which all discharges should be re-

ceived. All spoons, dishes, etc., used or taken from the sick-room, should be put in boiling water at once.

A pail or tub of the *Zinc Disinfectant* should be kept in the sick-room, and into this all clothing, blankets, sheets, towels, etc., used about the patient or in the room, should be dropped immediately after use, and before being removed from the room. They should then be well boiled as soon as practicable.

5. *Attendants*.—Not more than two persons—one of them a skillful professional nurse—should be employed in the sick-room, and their intercourse with other members of the family should be as much restricted as possible.

In the event that it becomes necessary for an attendant to go away from the house, a complete change of clothing should be made, using such as has not been exposed to infection; the hands, face and hair should be washed in thymol water or chloride of zinc solution.

6. *Miscellaneous*.—No inmate of the house, during the continuance of the disease, should venture into any public conveyance, or assemblage, or crowded building, such as a church or school; nor after its termination, until permission is given by the health authorities.

Letters must not be sent from the patient, and all mail-matter from the house should first be subjected to a dry heat of 250-280 deg. Fahrenheit.

Domestic animals, dogs, cats, etc., should not be allowed to enter the room of the patient, or, better still, should be excluded from the house.

During the entire illness the privy should be thoroughly disinfected with the *Copperas Disinfectant*, three to five gallons of which should be thrown into the vault every three or four days. Water-closets should be disinfected by pouring a quart or so of this disinfectant into the receiver after each use.

7. *Care after Recovery*.—The patient after recovery must be protected against the danger of conveying the contagion of the disease to others, and such precautions must be observed to this end as are necessary to the particular disease, at the discretion of the medical health officer. Nor must the convalescent be allowed to go out into public places, until the health officer certifies that

he or she is free from danger of communicating the contagion.

8. *Death and Funeral*.—In the event of death, the clothing in which the body is attired should be sprinkled with thymol water, the body wrapped in a disinfectant cerecloth (a sheet thoroughly soaked in the *Zinc Disinfectant, double strength*), and placed in an air-tight coffin, which is to remain in the sick-room until removed for burial. No public funeral must be allowed either at the house or church, and no more persons should be permitted to go to the cemetery than are necessary to inter the corpse.

9. *Disinfection and after Treatment of Premises*.—After recovery or death all articles worn by, or that have come in contact with the patient, together with the room and all its contents, should be thoroughly disinfected by burning sulphur. To do this, have all windows, fire-places, flues, key-holes, doors and other openings securely closed by strips or sheets of paper pasted over them. Then place on the hearth or stove, or on bricks set in a wash-tub containing an inch or so of water, an iron vessel of live coals, upon which throw three or four pounds of sulphur. All articles in the room and others of every description that have been exposed to infection, which cannot be washed or subjected to dry heat, and are yet too valuable to be burned, must be spread out on chairs or racks; mattresses or spring beds set up so as to have both surfaces exposed; window-shades and curtains laid out at full length, and every effort made to secure thorough exposure to the sulphur fumes. The room should then be kept tightly closed for twenty-four hours. After this fumigation—which it will do no harm to repeat—the floor and wood-work should be washed with soap and hot water, the walls and ceiling be whitewashed, or, if papered, the paper should be removed. The articles which have been subjected to fumigation should be exposed for several days to sunshine and fresh air. If the carpet has unavoidably been allowed to remain on the floor during the illness, it should not be removed until after the fumigation; but must then be taken up, beaten and shaken in the open air, and allowed to remain out of doors for a week or more. If not too valuable, it should be destroyed; but, whenever practicable it should be removed from the room at the beginning of the illness. After the above treatment has been thoroughly enforced, the doors and

windows of the room should be kept open as much as possible for a week or two. Where houses are isolated articles may be exposed out of doors. The entire contents of the house should be subjected to the greatest care, and when there is any doubt as to the safety of an article *it should be destroyed*.

All this work must be done—both the disinfection and the destruction of property—under the supervision of the medical health officer, sanitary policeman, or attending physician.

10. *Treatment of Clothing, Bedding, etc.*—Such articles of clothing, bedding, etc., as can be washed, should first be treated by dipping in the *Zinc Disinfectant*; they should then be immediately and thoroughly boiled. The ticking of beds and pillows used by the patient should be treated in the same manner, and the contents, if hair or feathers, should be thoroughly baked in an oven. If this cannot be done, they should be destroyed by fire, as should, in any event, all straw, husk, moss, or “excelsior” filling. The clothing of nurses should be thoroughly disinfected and cleansed before it is taken from the house, or, better still, should be burned if feasible.

11. *Public Assemblages.*—If from neglect or delay in enforcing precautionary measures, the disease shows a tendency to become epidemic, the public and private schools must be closed, church services suspended, and public assemblages of people, as at shows, circuses, theatres, fairs, or other gatherings, be prohibited.

12. *Best Disinfectants.*—Sunlight, fresh air, soap and water, thorough cleanliness—for general use.

For special purposes the following are the most efficient, the simplest and the cheapest:

I. *Copperas Disinfectant.*

Sulphate of iron (copperas) ...1½ lbs.

Water.....1 gal.

A convenient way to prepare this is to suspend a basket, containing about sixty pounds of copperas, in a barrel of water. The solution should be frequently and liberally used in cellars, privies, water-closets, gutters, sewers, cesspools, yards, stables, etc.

II. *Sulphur Disinfectant.*

Roll sulphur (brimstone).....2 lbs.

To a room ten feet square, and in the same proportion for larger rooms. See *Rule 9* for mode of use.

III. *Zinc Disinfectant.*

Sulphate of zinc (white vitriol)...1½ lbs.

Common salt.....¾ lb.

Water.....6 gals.

For application and modes of use see *Rules 4, 8, and 9*.

IV. *Thymol Water.*

Made by adding one tablespoonful *Spirits of Thymol* to half a gallon of water. *Spirits of Thymol* is composed of—

Thymol1 oz.

Alcohol, 85 per cent.....3 ozs.

May be used for all the disinfectant purposes of carbolic acid; it is quite as efficient and has an agreeable odor. See *Rules 3, 5, and 8*, for application and uses. Where thymol is not available, chloride of zinc solution may be used—half an ounce of chloride of zinc to one gallon of water.

Corrosive Sublimate (bi-chloride of mercury) has recently, after pretty thorough testing, acquired considerable popularity as an antiseptic and disinfectant. A solution, made in the proportion of one drachm of the salt to one gallon of water, may be used for all the purposes for which the *Copperas* and the *Zinc Disinfectants* are recommended.

SPECIAL instructions, in English and German, concerning each individual disease above specified, are to be found in the *Preventable-Disease Circulars* prepared by the STATE BOARD, copies of which may be obtained by addressing the Secretary, at Springfield.

Notification of Contagious Diseases:

UNDER the authority conferred upon the STATE BOARD OF HEALTH by Section 2 of the State Board of Health Act, it is ordered that, on and after January 1, 1883, the first cases of Small-Pox, Typhoid Fever, Asiatic Cholera or Yellow Fever occurring in any county, township, town or city in this State, as also the prevalence and progress of *any* epidemic disease, shall be promptly reported to the BOARD by the

local health authorities; it being borne in mind that in counties where township organization exists, the township board is the Board of Health, and in counties not under township organization, the county commissioners act in like capacity.

Reports of first cases must be made immediately upon discovery; and of the progress of the disease from time to time—at least weekly. Forward all reports to the *Secretary, State Board of Health, Springfield, Illinois.*

OFFICIAL: \

JOHN H. RAUCH, *Secretary.*

Vaccination of School-Children:

OFFICIAL ORDER CONCERNING THE VACCINATION OF SCHOOL CHILDREN.—At a special meeting of the STATE BOARD OF HEALTH, held in the City of Chicago, November 22, 1881, the following resolution was unanimously adopted:

Resolved, That, by the authority vested in this BOARD, it is hereby ordered that, on and after January 1, 1882, no pupil shall be admitted to any public school in this State without presenting satisfactory evidence of proper and successful vaccination.

OFFICIAL:

JOHN H. RAUCH, *Secretary.*

INSTRUCTIONS AS TO "SATISFACTORY EVIDENCE OF PROPER AND SUCCESSFUL VACCINATION."

THE object of this measure is to make sure that children in attendance at the public schools are properly protected against small-pox, to the end that their health may be preserved and interruption of schools by the disease may be avoided.

Evidence of this protection will be most readily and usefully afforded by means of the *Certificate* (Form 51), prepared and furnished by the STATE BOARD. Such certificate, filled out in accordance with the following instructions, will be received as the "satisfactory evidence" required by the Order:

1. Every public scholar under the approximate ages of twelve years if a girl, or fourteen years if a boy—see next paragraph—must present to her or his teacher, on or before the beginning of each school term, a certificate signed by a legally-qualified physician, stating (1) *name*; (2) *age*; (3) *residence*; (4) *date of vaccination*—as near as may be; (5) *date of examination*—accurately; and (6) *result*, as shown on the child's person.

The *date of examination* and the *result*, as shown on the person of the child, are matters which the physician must testify to of "his own knowledge." All else may be qualified in accordance with the facts—as to information or belief.

2. Children over the approximate ages above given—that is, who have passed through the developmental changes occurring about those ages, and which changes are known to frequently impair the protective power of vaccination performed prior thereto—must present certificates showing that they have been vaccinated or revaccinated, as the case may be, subsequent to those ages. In case, however, a given child has passed the years mentioned and such changes have not yet taken place, revaccination is not indispensable, provided the evidence of a successful primary vaccination is conclusive. The physician is the sole judge in each case, and his certificate must convey the necessary information to the teacher.

3. A certificate from a legally-qualified physician that a given child is protected by a previous case of small-pox or varioloid; or that it would be dangerous at the present time to vaccinate a given child; or that such insusceptibility has been demonstrated as, in itself, amounts to protection—shall be accepted by school authorities in lieu of the "satisfactory evidence" required by this Order.

4. All vaccinations should be performed by competent medical men; or, if by a non-professional person of sufficient skill and ex-

perience, the result must be examined and certified to by a legally-qualified physician. Such authority only is competent to pronounce upon the sufficiency of vaccinal protection, or upon the danger or inadvisability of performing the operation at a given time, or in certain conditions of the system.

5. In case of failure of a *primary* vaccination, the attempt should be repeated often enough (at intervals of a fortnight) to demonstrate the insusceptibility of the child. Five repetitions are not too many, and it not unfrequently happens that the seventh, eighth or ninth attempt is successful. Where less than five repetitions are advised by the physician, he must assume the responsibility of asserting the proper protection of the child. His endorsement of the certificate to that effect shall be received by the school authorities as entitling the child to school attendance.

6. If more than one in five primary vaccinations are failures, the physician should suspect the quality of the virus, and obtain a supply from a new source. With most physicians it undoubtedly is unnecessary to urge the importance of examination at a proper interval after the operation. Such examina-

tion should be always made, because, among other reasons, without it the vaccinator deprives himself of the only proof of the value of the virus employed, and his vaccinees may thence be reposing in a false security, which may prove disastrous.

7. To facilitate the tabulation of returns, and their subsequent examination in the Secretary's office, the use of the following terms, to describe the result, is desired: *Typical*, if the resulting scar is well-marked, characteristic, of normal size, and perfect in outline, depression and pitting; or, *Modified*, if, while well-marked and characteristic, the scar is less than normal size and of irregular contour; or, *Bad*, if the scar be less than one-fourth of an inch in diameter, or simply a smooth, flat, shiny mark.

The physician should always insist upon revaccination where the scar is "Bad" as thus defined.

8. Legally-qualified physicians may obtain the *Scholar's Certificate* blanks from teachers, school directors or other officers of public instruction; from county clerks; or, by mail, direct from the Secretary's office at Springfield.

INSTRUCTIONS to School Authorities, blank forms for returns, certificates, and all needed information, may be obtained by addressing the Secretary of the STATE BOARD OF HEALTH, at Springfield.

Sanitation of Our Younger Cities:*

THE increasing importance of city sanitation, and especially in our younger and smaller cities, induces me to offer some suggestions on this subject. Cities, as centers of population, are more liable than rural districts both to breed and to spread contagions. Their sanitation is at once more difficult and more important than that of the country places and villages. Sanitary science finds here its best field and its most urgent work. To warn our cities in their youth may save them from disasters in their larger growth.

The remarkable tendency of our times to city growth has already attracted the attention of our census-takers and publicists. Eighty years ago only one-thirtieth of our people lived in cities of over ten thousand inhabitants. To-day nearly one-fourth live in cities of that size and larger. Our rural populations grow dense, but our urban populations increase much more rapidly.

The forces of modern commerce and manufactures all tend to accelerate city growth. Cities, as centers of manufacture and distribution, attract more and more powerfully the working and trading populations; and these tendencies, added to the older social instincts which drew populations together for mutual pleasure and

*By JOHN M. GREGORY, I.L.D., President ILLINOIS STATE BOARD OF HEALTH. Reprint from *Fifth Annual Report*.

and display, for gayety and for greed, for mutual help and defense, are multiplying the numbers and enlarging the dimensions of our cities in an ever-accelerating rate which may well challenge the attention of publicists and sanitarians. The safety of the State and the health of the people are equally involved in the problems which emerge from this great social fact. In our own great State, marked alike by its central position, its resources and its surroundings, as a center of commerce and manufactures, the city growth has been characterized by an extraordinary rapidity of development. Chicago may be called one of the wonders of the world in the surprising suddenness with which it has peopled this flat and at one time marshy lakeside with the homes, workshops and warehouses of 600,000 citizens. And throughout the State, although with less rapid stride, our cities have multiplied until, instead of four cities of 5, 000 souls and upward, we have now twenty-two such cities, and more than 975,000 of our 3, 077, 871 of population are now living in these cities.

THE SANITARY PROBLEM.—Leaving publicists and political philosophers to discuss their side of the subject, we may properly attempt, as sanitarians and as a board of public health, to state the hygienic questions involved. The great sanitary problem before us, and before the people of this State, if not before the men of the country, is: How can 10,000 and upward of people live, work, rear families, manufacture or receive and distribute the goods of a large area of country, maintaining health, and morals which are essential to health, on a limited tract of land averaging 25, 000 or 30, 000 people to the acre?

To engage the serious attention of our city officers and city builders to the greatness and urgency of this problem is our first step, and a step of the highest importance. Our cities come by chance, and their plans are made by private land-owners, who plan the streets and blocks, and plat "additions" to suit their own tastes and to sell their lots at the highest figure. The sanitary needs of coming populations have small place in their esteem. These sanitary needs, which, at the outset, might have been effectually provided for at small expense, in after years require the outlay of millions, and are only effected after incalculable suffering, sickness, and hundreds of untimely deaths. How much did it cost the people of Chicago to change the grade of its streets after the city was largely built? And how cheaply and effectually could it have settled the now enormous question of its foul ditch-like river, had it been taken at the outset? In one of the smaller cities of the State, \$25, 000 were thrown away in a sense, now absolutely useless, if not harmful. How many such outlays have burdened with needless taxation nearly every city we have built? Let us, as a STATE BOARD OF HEALTH, say to all the young and growing cities of this State, speaking with all the emphasis we can command: "All present neglect to make the necessary provisions for the sanitary needs of your cities you must pay for in the future by the sacrifice of the health and lives of hundreds and thousands of your citizens, by visitations of epidemics, and by a final expenditure of vastly greater sums to remedy defects, with the probability that many of the worst will remain incurable forever."

Mr. Edwin Chadwick, of England, affirms that he could build a city that would give any stated mortality, from fifty, or any number more, to five, or perhaps some number less, in the thousand annually. Dr. B. W. Richardson says he believes Mr.

Chadwick to be correct to the letter in this statement. Ought not such an opinion, uttered seriously by such men, to arouse and rivet the attention of our city-makers, and force them to press persistently the question as to the means to the desired result?

A recent exposure of the dangerous unsanitary condition of Newport, R. I., which is one of the most popular health resorts of the wealthy, and has been held a very "city of refuge" for the invalid and the toil-worn, might well warn the younger cities of the West. One of the citizens, alarmed by these exposures, set to work, it is reported, to investigate his own premises, and found, to his horror and dismay, four old privy-vaults within 100 feet of the well from which he and his family drew their drinking water. It is affirmed that in many of the cities and villages of New England in which generations have succeeded one another for 200 years, the ground and the water supply are so poisoned as to make sickly populations where natural situation should have given more than average health. Many of our finest houses come in time to be built on ground where once the uncleanly hovels of poverty stood. Who can think of the filth-saturated soil without repugnance and alarm?

A SANITARY ENGINEER NEEDED.—Evidently the first condition to success is the employment of a city sanitary engineer. Every city of from 2,000 to 5,000 people which promises to grow greater, should employ, under the direction of its board of health, a competent sanitary engineer, whose first duty should be, in connection with the ordinary city engineer, to make a survey for the proper sewer-system for the drainage of the entire territory liable to be covered by the city in its future development. It may not be necessary to build the main sewers of the size which will be ultimately required, but the right location and system of connections and outlets may usually be fixed upon in the beginning. The enlargement, when the city of 5,000 has grown to a city of 50,000, will be easily made in connection with the repairs which time will demand.

The location of cemeteries, stock-yards, abattoirs, and such manufactories as may come in time to affect public health, ought also to be under the control of the sanitary engineer, and he should also have a voice in the disposition and control by the city of any water-courses, river banks, harbors, roads, or other waters which may ultimately become needful for public use, or changes in which may become necessary for the public health. Had the city of Chicago secured and retained the right to change the course of the river without first buying out the riparian owners, the great work which her safety now demands could be made at a cost of \$2,000,000, in place of the \$20,000,000 which it is said will now be required. The water-supply, the location of gas-works and mains, of streets and parks, of school-houses and hospitals should all pass under the supervision of the sanitary engineer. He may also be made the free professional adviser of every private citizen who wishes to erect a dwelling, a store, or a manufactory, and desires to assure himself of the proper sanitary arrangements of the proposed building. He should have the power to prohibit the erection of any building, large or small, whose construction would be dangerous to the health of its occupants. Especially ought he to exercise such oversight in the erection of school-houses, churches, public halls, theaters, public library rooms, prisons, hospitals and alms-houses, where the ignorance or parsimony of a few may imperil the lives of many.

The study of soil and subsoil, to determine its liability to saturation with gases or filth, its reservoirs of water needing to be drained, and the drainage into wells used either as public or private water-supply, this also, and a hundred other questions of places, times, and forces of health and sickness will fall to this officer. The skill and service of such an officer are imperative to a young city if it would avoid costly mistakes and would not expose its citizens to the catastrophies of preventable disease, or to the otherwise sure-coming epidemic.

The common health-officer might perform many of these duties if he had the requisite knowledge, or the sanitary engineer might, if qualified, act also as health-officer; but the qualifications required for the two offices are so dissimilar in many particulars that rarely will a man be found to possess them all.

It is said by a high authority in such matters, that we have no true and competent sanitary engineers, and that the wide extent of medical, scientific and professional knowledge required by such an office forbids the hope of finding him. But we have those whose sanitary knowledge fits them to be good sanitary inspectors, and by associating with these needed medical and engineering experts, our cities may secure the indispensable survey and sanitary projection of their territory. Such sanitary survey put upon record would remain to guide the future builders of the city, and would furnish the fit foundation for another's work, when growing needs should lead to his appointment.

We can scarcely do more, now and here, than catalogue the chief sanitary wants and conditions which must attach to every cities, small or great. But it will not be useless to present this catalogue, since so often the energetic business men who plan and build our cities are either ignorant of these conditions, or in their intense activity forget and overlook them.

LOCATION OF CITIES.—If it were not that the location of our cities is nearly always determined by circumstances beyond human control, or by accidents which no one can foresee, I should place first in the list of sanitary conditions the choice of a naturally favorable and healthy locality. But since where the lot falls there it must lie, it remains only for man, with his wealth and wisdom, to overcome the difficulties which nature opposes to his work, and to supply by his labor the goods she refuses to bestow. He must, if needs be, turn her marshes into dry ground, and import, from whatever distance, the supplies of water demanded for his culinary and other personal uses, and for the cleansing of houses and streets. Even the ground on which to plant his dwelling and to raise the grade of his streets has sometimes to be imported from without. If the founders of cities could take account for life, as well as for commerce, more healthful and more beautiful locations might be secured. But whatever the location that chance or choice may give to the city, the necessity of a thorough sanitary survey is imperative, and can not, in any case, be safely dispensed with. However healthful at the outset, the progress of years and the effect of long population will be sure to work changes which ought to be foreseen and provided for from the beginning.

PLAN OF CITY.—Next to location, comes the question of the plan of the city, including the spaces to be devoted to streets, parks, public grounds and buildings, and especially the location of the institutions in which the young are to be educated,

or in which the unfortunate, the criminal, and the infected classes are to be domiciled and provided for.

The location of all these must be planned, not only with due reference to the convenience of access and use, and to the social surroundings, but also with a strict regard to soil, subsoil, slope, natural drainage and the sewer-system. It must be recognized at the outset that all these public appurtenances will come, and they should have their proper places assigned them at the earliest hour practicable. How many of our cities are spoiled by lack of foresight, and by the unsightly and unsanitary placing of hospitals, almshouses and other buildings.

STREET SPACE.—The street spaces in most of our western cities are ample in breadth, but wretched in arrangement. Out of sixty or more feet in width, ordinarily given to city streets, in the newer cities eight feet on each side are devoted to the sidewalks and such shade trees as adjacent lot-owners may plant, and the entire space between, of forty-four to fifty-four feet, is devoted to gutters, dust and mud. This unnecessary breadth usually forbids the expense of pavement, and in the course of years the whole space becomes filled and saturated with filth of every conceivable sort. The air above such streets must either reek with the vile vapors exhaled from them while wet, or the still viler dust lifted from them when dry.

The careful scientific examinations made of common street air by such men as Prof. Tyndall, and equally eminent German scientists, show conclusively how foul and dangerous such air commonly is. As Prof. Tyndall says: "One would shrink with horror from the stream of air entering his mouth and lungs if his eyes could be opened to see the filth, the rottenness and poison, the fragments of waste vegetable and animal tissues, and the disease-bearing germs which fill and load this air, apparently so fresh and clear." Of what use to flush our sewers, cleanse our houses, and disinfect our yards, if the very streets, where we walk or ride for business or pleasure, and, save the mark, for health, are to be left wide expanses of ever-increasing foulness and infection?

True sanitary science would direct that the road-bed shall be made as narrow as the travel upon it will permit. Sixteen feet will allow carriages, and even loaded wagons, to pass each other easily and without danger. Four or six feet added to this, making the road-bed twenty to twenty-two feet in width, will be found ample for ordinary residence streets.

THE BUSINESS STREETS—may require ten or fifteen additional feet, and when we reflect how much business is transacted in such streets as the business streets of London and New York, our proposed limits will not seem preposterous. By this reduction in width we should not only lessen by nearly one-half the area of danger, but we should make it possible for even small cities to meet the expense of a pavement which might be thoroughly cleaned and kept clean by daily sweepings and ablutions.

Let it not be understood that we would diminish by a single foot the entire street space. We would only widen the walks and stretch an ample border of green grass to beautify and make healthful by its presence the place where so much of human life is at stake. We would import between the long lines of brick walls, of crowded city homes, as much as possible of the freshness and greenness of the country places. Thus both economic and sanitary considerations would

lead to this street reform. In our Illinois towns, where road material is so scarce, and where paving is so difficult and costly, this suggestion ought to meet with prompt favor and adoption.

Paris owes much of its far-famed beauty to these grassy, shady street sides, which stretch like elongated parks through that renowned city. And Washington, our own National capital, is fast becoming the most beautiful city on this continent, if not in the world, by a similar process of narrowing and paving with asphalt its road-beds and widening the long strips of green at their sides. In Illinois, the frightful mud which during so many weeks makes the streets of such cities as Springfield, Bloomington, Decatur, and the younger cities of Champain and Mattoon, almost impassable, ought to urge upon these, and all cities situated like them, to lessen the road-bed to the narrowest feasible limits, in order that they may be properly paved and purified.*

It is a custom in some of the eastern towns to require that each family shall daily sweep the walk and half the street in front of the premises it occupies. If the road-bed were made narrow and well paved, as we propose, this requirement would not be a hardship, and streets thus cleansed could not seriously offend against sanitary laws.

THE PARKS OF OUR CITIES—ought also to receive the attention of all who would make the cities both healthful and beautiful. Great breathing places they are, where the tired population, and especially the infant and invalid, may come nearer to nature, with its green fields, its vivifying sunshine, and its gratefully cooling shades, and find themselves refreshed and made purer at heart and life by her always kindly and wholesome ministrations to her children. There is, perhaps, no sanitary provision which compares in cheapness and efficiency with these. As all house life is more or less unhealthful, the more our people can be tempted into the open air the better for them; and when we add the inspiring social influence of the neighboring park we shall see how both mind and body are helped by it. It is not sufficient that there shall be great and expensive parks upon the distant outskirts of the city to which the crowds may go on gala days. There should also be smaller parks and play-grounds scattered through the city, which shall invite by their proximity, as well as by their beauty, the tired house-wives, the suffering invalids, and the nurses with the children out of the houses and out of the streets. Let the city authorities make it a law that no land-owner shall be permitted to make an addition to the city's limits without giving at least one block in every ten of his proposed addition to the public as a park. Had Chicago done this forty years ago, to-day she would have scattered through her denser portions, a score or more of beautiful little parks, like Jefferson and Union park, and whoever will visit these bits of open ground and see the crowds which frequent them, will easily conclude what a world of joy and health and happiness would come to our great Queen city from such wise foresight in its early founders and builders. If our younger cities would take the hint, they may be better provided.

The early planting of these parks with the elm, and maple, or other of our American shade trees, would enhance at once their value and their beauty. Let the

*This is, now, 1884, being done to a very considerable extent in Springfield.

birds come to mingle their carols with the glad laughter of the children at play beneath the shade, and cheer tired men and women into happier and healthier moods of thought and feeling, and renew wasted energies and health. The well-kept public park is the noblest boon a city ever gave to its children and its poor. I never see one with its groups seated in the shade or strolling along its winding walks by mimic lakes, or banks of flowers that I do not feel in my heart a rising benediction to the wisdom and public spirit that planned it.

WATER-SUPPLY.—The water-supply, by general agreement of leading sanitary authorities, is one of the most important of the sanitary needs of cities, if it does not lead all others. While, however, these authorities justly lay stress upon the vital importance of purity, too many others are so far influenced by purely engineering considerations as to limit the supply to a quantity far below not only what the sanitarian would regard as necessary, but even below the amount actually furnished in most American cities. Thus, while Parkes, Denton, Rankine, Latham and other English authorities, consider from 25 to 35 gallons per day sufficient for all domestic, manufacturing and other purpose; and Nichols, in the standard American sanitary authority (Buck's *Hygiene*,) regards an average of 60 gallons per day for each inhabitant as a very liberal provision; yet, as a matter of fact, the average supply in American cities is about 66 gallons per capita.

Even this is wholly inadequate for the sanitary requirements, and the lack is more fatal to public health than our people suspect. The relations of water to life and health are as yet only half understood. Its influence upon the air we breathe may be conjectured if we compare the healthfulness of the seaside with that of the arid desert; or if we note the effect of the rain which comes to break a long and enervating drought. Our city builders should heed these lessons, and take in within the scope of their plans an ample, inexhaustible supply of pure and wholesome water.

No sewer-system, however wisely arranged, can succeed without an ample water-supply. The occasional flushing is not enough. A strong current, and the stronger the better, must be kept moving through these dark channels of filth. The flushing ought also to be more frequent than is common. The supply must, therefore, be sufficient, not only for culinary and other household uses, for lavatories, water-closets, and all cleansing purposes, but also for the constant flushing of sewers, the extinguishing of fires, the washing and sprinkling of streets, the watering of parks, the supply of public fountains and water-troughs, and for all the manufacturing work which cities inevitably attract. For these various purposes—domestic, industrial, ornamental, and sanitary—a daily supply of from 200 to 300 gallons per capita should be provided, the amount varying with the size, situation and other conditions of the city, and remembering that the less the population the larger the amount per head required.

The purity of all contiguous waters, of ponds, rivers and lakes, needs also to be guarded; for the water so necessary to health, may hide in it the germs and sources of infection. The pond which serves as the cemetery for dead cats and dogs, and as the cesspool for all neighboring filth is a Dead Sea of disease and death. Its very power of absorption makes it the hiding place of noxious gases, and the breeding ground of all miasmatic germs and influences. Even the subterranean

water beds, and the wells which penetrate them need to be watched and guarded by proper drainage.

FOOD-SUPPLIES.—In general, people must win and choose their own bread and meat; but it is too obvious to need argument, that the food-supplies of cities must come from a distance, and the larger the city the greater the distance. In the long transportation decay begins its work and incipient disease is engendered. Cupidity, fearing loss, conceals as best it can the damaged and tainted character of the meats and fruits it offers for sale, or tempts the poor, by a cheaper price, to buy and use its unwholesome viands. Adulteration comes to add its deceits and dangers, and the poor denizens of the city homes are beset with dangers in almost every dish which appears upon their tables. A thorough system of public inspection by competent, vigilant, well-paid and well-watched inspectors may ward off much of the danger; but the remedy should begin back of that, in a well chosen location of the abattoirs and slaughter-houses in a healthful situation, where the animals destined for slaughter may have ample yards and a supply of food and water, and where the meat may be free from tainted, and germ-bearing air; and in the proper location and construction of the market-houses, to allow them to be kept clean and sweet, free from all decaying animal or vegetable substances, and from all taint of pollution and disease. The best food-material may be spoiled in a few hours by the absorption of filth from a polluted and poison-loaded atmosphere. Cities must meet with due care the artificial conditions which compel them to bring their food from such wide areas, or the ruined health and the scourging epidemic will surely punish their neglect. Let it not be said, "our fathers did not care for all these things and they lived without fear or harm." They lived till they died; and the low average of life in their generations shows that the many died before their time, and of preventable diseases. The history of the past gives no argument for the neglect of sanitary measures.

PUBLIC BUILDINGS.—The city is the home of crowds. A great orator, singer, player or preacher, easily fills churches, halls or theaters with the dense masses of breathing human beings. Schools, courts, and all public assembly rooms are liable to be filled with daily crowds; and no deadlier foe to health and life can be found than the breath-poisoned atmosphere of a crowded room. Stringent ordinances in every city ought to forbid the erection of any public hall, theater, church, school-house, or other building for public assemblies, till the plans are inspected and approved by competent sanitary authorities. It is a gross neglect of public health to allow such death-traps to be opened, as are many of the popular halls and meeting rooms. No hall, school-room, theater or church is safe in which the whole volume of air cannot be changed as often as once in every ten minutes, and in no case can this be accomplished where the two sides of the room, at least, are not outer walls, with abundant and large windows reaching nearly from floor to ceiling, and where at least one-tenth of the roof space cannot, in case of need, be opened for the escape of the breath-loaded and body-heated air. It is astonishing ignorance or stupidity which allows an over-greedy builder to add a third story to his building in the middle of the block, and fit it up as a public hall for lectures and concerts, cutting off the front, perhaps, as offices, or the rear as dressing-rooms. Let the city itself erect,

on some public square, a public building, with ample halls large and small, to be let to societies or traveling troupes and lecturers, in which the public health and safety can be fully cared for. If private parties can provide such halls at a profit, certainly a city can afford to supply them and take their revenue. If the city outgrows the one, let it add others at convenient points; and if it will provide in these public buildings, rooms for its offices, for public libraries, museums, scientific and art collections, for evening schools and lecture courses, it will help at once the civilization and sanitation of its citizenship. If cities must exist; if people will crowd together in great multitudes to live along the sides of narrow streets, and throng the public places, they must needs take care, at whatever expense, of that priceless but perishable good, bodily health.

While our young cities are eager and alert to attract trade and population, while they welcome capital and business, and pay bounties even for the incoming of manufactories and their crowds of operatives, let them not begrudge the expenditures to provide for the preservation of this mass of busy life and strength. Let them remember that the epidemic which they tempt is the most relentless of tax-gatherers. The contagions love cities as their warmest breeding-places and richest harvest fields, and the health enfeebled by public parsimony falls an easier prey to the fiery plague, and falls as fuel which feeds the flame and speeds its march. Save to-day your taxes for public health, and to-morrow, or within the year, they will be demanded of you four-fold for wasted health, for the buried dead, or for the business ruined by the epidemic scare of fever or of plague.

THE CITY BOARD OF HEALTH.—An efficient board of health, with a good competent health officer, with all needful rules and facilities for the quarantine and care of those who are suffering from contagious diseases, has also a place, and a place of indispensable importance in the sanitary requirements. In the case of invasion by contagious disease, the prompt action by the board of health, with ample and recognized powers, is the only security against infinite disaster and distress. But a true board of health will not be merely a "life saving service," for the occasion of a storm; it will be also the lighthouse to warn of danger and show the path of safety. The police board, that watches against crime and defends property, renders a more obvious, but not a more valuable service than the health board which watches against the more wasteful desolations of disease, and guards life itself from the stealthy assault of assassins that lurk in the tainted air, and breed in neglected sewers and cess-pools.

The members of this important board should be chosen, first, for their competency, not simply as physicians, but as sanitarians; and, second, for their energy and activity in public good. And thus chosen, they should be given ample authority to forbid nuisances in building and in business, to quarantine and control in contagions and epidemics; to placard all places of danger, and to provide for the public health. Even despotism may be endured when the alternative lies between despotism and destruction.

OTHER provisions of city sanitation may easily be noticed by the thoughtful and the expert, but with the fulfillment of those already named the others will be readily seen and met as they arise. The health of our State depends largely upon the

health of its cities—those storm-centres of infection and epidemics. The sanitation of its cities will raise, by natural consequence, the better sanitation of its country homes and thus of the whole people.

General Sanitation.*

DRAINAGE.—A thoroughly-drained soil is all important. This should be secured where practicable, by a complete system of sewers or underground drains. If this is not practicable, superficial or surface drains should be properly located, and frequently examined, so as to insure cleanliness and effectiveness.

It is of the first importance that dwelling-houses should be built on dry ground so elevated that there shall be no possibility of an accumulation of stagnant water under the floors at any time.

Constant inspection of houses, cellars, yards and outbuildings is imperative, so as to prevent the accumulation of filth, garbage or masses of decomposing organic matter so prejudicial to health. It is equally necessary that some means be devised for the disposal of the same, so as to render it harmless.

WATER-CLOSETS AND PRIVIES.—Foul odors are Nature's signal of danger. Water-closets should be properly constructed, kept free from odor and always plentifully supplied with water. The waste-pipes should be wholly disconnected from all other pipes and provided with independent ventilation. They should be so located as to avoid all possibility of polluting the air of any other part of the house.

Where privies are used, they should be built above ground with water-tight vaults, kept always free from foul smell by the liberal use of dry earth sifted upon the contents or by the use of a solution of copperas. They should be emptied at least twice a year, or oftener if the contents accumulate to more than one-third the capacity of the vault. The walls and ceilings should be thoroughly whitewashed.

Instead of ordinary privies, the pail system in general use in many of the manufacturing towns of England is recommended as being found to combine economy, simplicity of construction, easy management, with great facility for removing contents without odor or inconvenience.

Privies should be so placed as to prevent their exhalations from contaminating the air of houses or polluting the sources of water-supply from wells or cisterns.

WATER-SUPPLY.—“Water, next to air, is the chief necessary of life.” We may even place it before food, because all food is largely composed of it; and it is required, too, for personal cleanliness, and for the purification of our houses and their surroundings.

Running streams and springs, which are the best sources of water-supply should be frequently examined, in order to detect otherwise unsuspected causes of pollution.

Cisterns should be constructed of suitable material, carefully built and covered, and so placed that no foul air can pass through or over the water they contain. The overflow pipes from cisterns should be free from connection with any other pipes. Roofs and gutters supplying cisterns must be frequently inspected, and some simple contrivance should be adopted to insure their careful cleansing, before the water is

*Reprint from *Fourth Annual Report*, ILLINOIS STATE BOARD OF HEALTH.

allowed to run into the cistern. Cistern-water ought to be frequently examined and kept free from color, odor, or other indications of impurity.

Wells are the most dangerous sources of water-supply, for few wells are safe from surface pollution. Wells should, therefore, be properly located, to avoid all possible risk of contamination from their surroundings, carefully built with elevated curbs and covered tops. The water they contain should be examined at short intervals.

A simple method of examination is by dissolving a lump of loaf sugar in a quantity of the suspected water in a clean bottle, which should have a close-fitting glass stopper. Set the bottle in the window of a room where the sunlight will fall on it. If the water remains bright and limpid after a week's exposure, it may be pronounced fit for use. But if it becomes turbid during the week, it contains enough impurity to be unhealthy. Such water should not be used for drinking purposes until it has been boiled and filtered; after which it should be aerated by any simple process, such as pouring several times from one vessel into another in the open air. The addition of a solution of permanganate of potassium will also serve, in most cases, to sufficiently purify water for drinking purposes. Eight grains of the permanganate to one ounce of distilled or boiled water will make the solution. Add one drop of this to a half pint of the suspected water; if the red tint disappears in half an hour, add another drop. For every drop that loses its color in the half pint, there will be from one-half to two grains of organic impurity in one gallon of the water. If such water must be used, drop in the permanganate until the red tint remains; the solution in this proportion is not injurious, nor does it taste unpleasantly.

DWELLINGS.—The prime conditions of health in a house depend upon cleanliness, pure air and unpolluted water; the prompt and thorough removal of all refuse; and the perfect exclusion of all foul matters arising outside the house.

Good ventilation is absolutely necessary. Rooms should be frequently aired, and a daily visit from Dr. Sunshine encouraged. Overcrowding is a fruitful source of air-pollution in dwellings.

Zealous attention should be paid to cellars, pantries and passages. Mold, dampness and foul smells are never to be neglected. The sun's rays, free ventilation and a lavish use of whitewash are excellent scavengers.

The floors of dwellings should be frequently washed. Choose for this purpose a dry day; doors and windows to be left open during and after the operation until thoroughly dry. The floors of dwellings should always be raised from three to four feet above ground, so as to insure perfect ventilation beneath, and the site should be higher than the surroundings, so as at all times to prevent dampness or presence of stagnant water.

DISINFECTANTS AND DEODORANTS.—More than half of these agents are valueless in preventing disease, and dangerous as being productive of false security.

Heat and pure air are the best of all disinfectants. When other agents are necessary, the following list will be found useful:

Copperas can be used almost anywhere, cheap and efficient. Especially useful in privies, etc. Ten pounds in a pailful of water; a teacupful in bed-pans, cham-

bers, etc., after being used. A quart a day in privies, urinals, etc., for ordinary purposes. In dangerous diseases add from a pint to a quart to each discharge. The contents of a privy six feet in diameter and twelve feet deep, will require twenty pounds of copperas to disinfect it.

Quicklime and gypsum or land-plaster are good absorbents, and may be used advantageously in damp places, cellars, gutters, etc. They should not, however, be used in drains, catch-basins, sewers, soil pipes, etc.; nor where they are liable to be washed into such places, lest, by decomposing soap-water, they form lime-soap and obstruct the passages.

Charcoal is one of the best deodorants, absorbing large volumes of gases. May be used in powder, mixed with lime or gypsum, and sprinkled freely in malodorous localities. Suspended in a basket, in cisterns, meat-safes, dairies, etc., it tends to keep the contents from absorbing foul odors. Charcoal should be frequently reheated to drive off the absorbed gases and renew its efficiency.

Carbolic acid and the coal-tar disinfectants are only admissible for outdoor use, on account of their odor. Mixed with gypsum, they are valuable around stables, outbuildings, etc. A gill of carbolic acid in a pailful of water may be used to flush sewers, drains, etc., and in privy-vaults and catch-basins.

Chloride of lime is sufficiently well known not to need a special mention here, except to say that its value is greatly over-rated. The addition of strong vinegar or dilute sulphuric acid (oil of vitriol) materially increases its efficiency.

Chloride of zinc may be used instead of copperas, and has the advantage of neither bleaching nor staining white or colored fabrics with which it may come in contact. On this account, it is especially useful in disinfecting clothing, bedding, etc.

Of the large number of proprietary preparations sold for disinfecting purposes, it is not necessary to treat in this connection. If further information is needed, consult your medical health officer or family physician. (See, also, '*Best Disinfectants*,' page 38 of this pamphlet.)

INDIVIDUAL DUTY AND RESPONSIBILITY.—The foundation of healthy living—which is the object of all sanitary effort—is, obviously, the cleanly, healthful condition of each individual home and its surroundings. No amount of official care and authority will suffice to avert disease and premature death—if not in the form of epidemic pestilence, still not less surely by some one of the many preventable maladies—unless proper attention be given to the ventilation of every part of the dwelling, whereby foul odors and poisonous gases, which are constantly produced by every living being, may be diluted to harmlessness and swept away, and an abundant supply of fresh, pure air may be provided; unless every form of dirt and filth, of decomposing animal and vegetable matter, of foul moisture and stagnant water, be promptly and thoroughly disposed of; unless suitable clothing, properly-cooked food, personal cleanliness, and regular habits of life are made fundamental principles in the household. Those are matters which require no health ordinances, nor sanitary rules and regulations. Personal responsibility and duty to the com-

munity demand that every householder should see that his or her premises and surroundings are placed in the best possible sanitary condition in all these respects and without delay. Without such individual effort and interest, all else will be of little avail, since there is a clearly defined limit beyond which neither State nor municipal authority can extend. *Each for himself must realize that, in sanitary matters at least, he is his "brother's keeper," as well as his own; and should act upon it at conviction forthwith and continuously.*

